EXHIBIT 1

A History of the Jackson County Landfill and R.J.Reynolds Foods

In the matter of:

The Goodyear Tire & Rubber Company v. Conagra Foods, Inc., et. al.

United States District Court for the Southern District of Ohio Case no. 2:20-ev-06347-JLG-EPD

Expert Report of Keith A. Zahniser, PhD

February 27, 2023

Keith A. Zanniser, PhD



Executive Summary

Introduction

Attorneys representing the Goodyear Tire & Rubber Company asked me to produce a history of the Jackson County Landfill, Jackson, Ohio (JCL), during the years of its operation, including an assessment of whether certain entities may have deposited waste in the landfill.

In the report that follows, I provide a history of the development and operation of JCL from the late 1960s until approximately 1987, when the Ohio Environmental Protection Agency (OEPA) ordered the landfill to cease accepting waste. The report begins with an overall chronological history of the landfill's operation, from its origins to approximately February 1999, when the OEPA and JCL's owners entered a final consent decree, settling litigation over the owners' violations of Ohio solid waste laws and failure to properly close the landfill. Following this chronological history is a profile of R. J. Reynolds Foods, Inc. (RJR Foods) that briefly describes RJR Food's company history, facilities and operations in the Jackson area, and waste streams sent to JCL, to the extent possible based on collected historical documentation.

Opinions

Based on my research in the available historical documentation, I have formed the following opinions:

- JCL operated as a permitted solid waste landfill from April 16, 1970 (when it was named the Jenkins Sanitary Landfill), to August 20, 1987, at 1841 Smith Bridge Road (Jackson County Road 60) in Liberty Township, Jackson County, Ohio. During its operational years, JCL accepted hazardous substances, liquids, and sludges in violation of its permit; failed to maintain required daily cover; failed to seed finished areas according to regulations; discharged leachate to a nearby waterway; was out of compliance with its original design contours and operated outside its approved boundaries; open-dumped foundry sand and other foundry wastes away from the landfill's working face; and used non-approved soil cover. On the basis of such violations of the Ohio Administrative Code, the OEPA in August 1987 issued Director's Final Findings and Orders (DFFO) on JCL, ordering the landfill to cease operations effective August 20, 1987.
- R. J. Reynolds Foods, Inc. acquired the Chun King food processing plant at 100 East Broadway in Jackson, Ohio, in 1966, and operated the plant, primarily producing frozen Asian-American cuisine, until the early 1980s.
- From 1969 to the early 1980s, RJR Foods deposited wastes at the Jenkins Sanitary Landfill (JSL)/JCL that included at least dough and outdated packaged food products, "slop" containing cooking oil, and pesticides. As of 1970, RJR Foods was contributing approximately twelve tons of waste to JCL daily.

Qualifications

I earned my PhD in U.S. History from the University of California, Santa Barbara, in 1997. In my course of study, I focused on the Progressive Era, 1880 to 1920, and particularly the issue of municipal reform. I was an adjunct professor at Ohio State University from 2001 to 2003 and an adjunct professor and visiting assistant professor at the University of Southern Indiana from 2003 to 2005.

In 2006 and 2007, I worked for the historical consulting firm of Morgan, Angel & Associates. In 2007, I joined Historical Research Associates, Inc. (HRA), a history and cultural resources management consulting firm, as head of HRA's Washington, DC, office. I am currently a Senior Historian at HRA. I conduct historical research and writing for a wide range of clients, including federal government agencies and private companies, on issues of historic contamination, including at complex multi-party Superfund sediment sites. I have also researched the land use and history of manufacturing and military entities, as well as the historical processes, production, and waste streams of operations at various hazardous waste sites. I have not testified as an expert at trial or by deposition in the previous four years. My résumé, including a list of my publications from the last ten years, can be found in Appendix A.

Compensation

HRA is being paid its standard rates for consulting engagements, which range from roughly \$107 to \$215 per hour for general research work. My rate as a testifying expert for this engagement is \$186 per hour. Our expenses are reimbursed at cost. HRA's payment is not contingent on my opinions or the outcome of the litigation.

Research Method

Documents Considered

At my direction, my colleagues and I reviewed the following historical materials in preparing this report:

- Documents produced by OEPA pertaining to JCL, its operation, and its regulation by OEPA and local boards of health.
- Documents produced in response to OEPA requests for information pertaining to R. J. Reynolds Foods.
- Documents produced by defendant Reynolds as a part of the current litigation.
- Newspaper articles, business journals and other sources of business information, and other
 miscellaneous sources of historical information collected by HRA historians online, at the
 Jackson City Library (Jackson, Ohio), and at the Ohio History Collection Library and
 Archives (Columbus).
- Documents from various manuscript collections at the Ohio History Collection Library and Archives (Columbus) concerning OEPA.

- The June 10, 1998, deposition of J. Gregory Fields taken as part of *State of Ohio v. Sanitation Commercial Services, et al.*, No. C2-97-984, filed September 4, 1987, in the U.S. District Court for the Southern District of Ohio, Eastern Division.
- A 2006 report summarizing interviews conducted with Mr. Fields and other individuals familiar with the historical operation of the JCL.
- Declarations and recent depositions in the current litigation.

Notably infrequent among extant historical documents concerning the JCL are the day-to-day operational records of the landfill itself, allegedly removed from the possession of Greg Fields when Sanitation Commercial Services was acquired by Mid-American Waste Systems in 1989.

Documents Used

The specific documents upon which I rely are cited herein.

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Jackson County Landfill History

Jenkins Sanitary Landfill, 1969-1972

Before the 1970s, the City of Jackson, Ohio, operated an open dump on Hammerstown Road, one mile west of Jackson, for its waste disposal, in conjunction with the Jackson County Board of Health (JCBH). Beginning in the late 1950s, Mayor Wayne B. Harbarger and the City Council expressed interest in replacing the open dump with a sanitary landfill. Discussions about a city sanitary landfill continued into the early 1960s. In September 1962, the City opened a fifty-acre sanitary landfill on Pattonsville Road, four miles outside the city, and made plans to abandon the open dump. However, the new facility did not solve the city of Jackson's waste disposal issues as hoped. Just a few years into operation, in 1966, the Ohio Department of Health (ODH) found that the sanitary landfill was actually operating as an open dump, with several weeks' worth of uncovered refuse piling up, causing nuisance odors and unsanitary conditions.

In July 1968, ODH reported on a new waste disposal site prospect for the city of Jackson. Clarence Robinson, engineer in charge at ODH, reported to Mayor Milton Miller that the privately owned site, located on one hundred acres three miles northwest of Jackson, would initially serve only the city of Jackson, but that it may later receive wastes from other parts of the county. Previously a coal mining site, the property contained "worked out strip mine pits," which owner Leslie Ramey would need to drain before waste disposal began.⁵

By July 1969, the proposed landfill site had changed ownership, and Donald D. Jenkins applied to ODH for a license to operate a solid waste disposal facility under Section 3734.05 of the Ohio Revised Code, on Jackson County Road 60. With his application, Jenkins provided an "Operational Procedure Plan," to which he would adhere while waiting for ODH approval. ODH accepted Robinson's July 1968 letter about the site as proof that the site was "satisfactory" for landfill

¹ Brinton Allison, Health Commissioner, Jackson County Board of Health, to C. M. Robinson, District Sanitary Engineer, Ohio Department of Health, Southeast District Office, April 3, 1958, GY0028925; C. B. Belling, Engineering Technician, Ohio Department of Health, to Mrs. Denver Lewis, Jackson, Ohio, August 31, 1961, GY0028912.

² Belling to Lewis, August 31, 1961, GY0028912.

³ Charles Terry, Sanitarian Administrator, Jackson County Board of Health, to A. L. Fishback, Principal Sanitary Engineer, Southeast District Office, Ohio Department of Health, August 28, 1962, GY0028911; "Sanitary Landfill Starts Next Week: Present City Dump Will Be Closed As New Landfill Site Is Ready For Operations," *Jackson Sun-Journal*, August 30, 1962, GY0028909–910.

⁴ Paul Flanigan, Principal District, Sanitary Engineer, Southeast District Office, Ohio Department of Health, to Mayor & Council, Jackson, Ohio August 31, 1966, GY0028907; Brinton Allison, Health Commissioner, Ohio Department of Health, to Mayor Milton Miller, Jackson, Ohio, May 19, 1967, GY0028905–906.

⁵ Clarence Robinson, Engineer in Charge, Ohio Department of Health, to Milton Miller, Mayor, Jackson, Ohio, July 19, 1968, GY0028904; Paul Stull, Engineer, "Report on the Structure and Operational Procedure for Jenkins Sanitary Landfill, Jackson, Ohio," February 24, 1970, 5, GY0028869 at GY0028874; "Notes from 10/01/98 Interview with Greg Fields, Jackson County Landfill," 1, GY0001055 at GY001055.

purposes.⁶ To prepare the site for landfill operations, Jenkins had removed stacked spoils from coal mining operations, using it as fill on roads through the site.⁷

In Jenkins's Operational Procedure Plan, he described a forty-acre site, of which he planned to use twenty acres for disposal of 22.5 tons of domestic, 3 tons of commercial, and 0.5 tons of agricultural waste daily. He proposed that wastes would be "spread and compacted" at the end of each day, "unless need for intermittent spreading and compacting arises." He would use spoils from the previous mining operation as cover material. He indicated that there were to be no "sewage solids," "sewage liquids," or "hazardous substances" handled at the site, but that "oil" would be "tanked and used for dust control." He also planned to spray insecticides and provide "solid vector" rodent control "as recommended by health department." Jenkins estimated that the landfill would reach capacity in ten years, after which the site might be used for grazing or forestry purposes. In a June 10, 1998, deposition, Jenkins's son-in-law and subsequent site owner J. Gregory Fields claimed that neither he nor Jenkins actually used oil for dust control on the site, because the roads were made from iron dust, and oiling would have caused them to turn into iron.

Also in July 1969, the Jackson County Planning Commission confirmed to the JCBH that the proposed sanitary landfill did not conflict with any county plans. ¹⁰ Jackson County Health Commissioner Brinton J. Allison informed Jenkins that the site appeared satisfactory for solid waste disposal and opined that "with good planning, conscientious operation and post fill maintenance," it "should cause no sanitary nuisance conditions and the filled areas should be usable at some future date for agricultural purposes or for the construction of dwellings." Allison reminded Jenkins that "the pits containing surface water should, of course, be drained prior to placing any solid waste in them as previously discussed." He encouraged Jenkins to submit plans to ODH expediently, so JCBH could issue a license. ¹¹ In a 1998 interview, Fields suggested that Jenkins, and later he, placed three to four inches of mine spoils at the bottom of any former strip mine pits before depositing waste materials. ¹²

On August 1, 1969, Jenkins Sanitary Landfill (JSL) opened under a temporary permit. In April 1970, ODH approved the landfill's dimensions and plans. In its approval, ODH specified that Jenkins must operate the facility in compliance with Ohio Sanitary Code and that JSL could not accept "liquid wastes not covered by the approved specifications and plans" without ODH

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⁶ Charles Terry, Sanitarian, Ohio Department of Health, to Thomas Bennett, Director of Public Services, City of Jackson, July 23, 1969, GY0028894–895; Max Morrow, Chairman, Jackson County Planning Commission, to Jackson County Board of Health, July 23, 1969, GY0028893.

⁷ Stull, "Report on the Structure and Operational Procedure for Jenkins Sanitary Landfill," February 24, 1970, 5, GY0028869 at GY0028874.

⁸ Ohio Department of Health, "Recommended Operational Procedure Plan - Outline for Solid Waste Disposal Sites, Jenkins Land Fill," circa August 1969, GY0028884–891.

⁹ Deposition of J. Gregory Fields, in the United States District Court for the Southern District of Ohio, Eastern Division, State of Ohio, Ex Rel, v. Sanitation Commercial Service, et al., Case No. C2-97-984, June 10, 1998, 47–48.

¹⁰ Max Morrow, Chairman, Jackson County Planning Commission, to Jackson County Board of Health, July 23, 1969, GY0028893.

¹¹ Brinton Allison, Health Commission, Jackson County Board of Health, to Donald D. Jenkins, July 23, 1969, GY0028892.

¹² "Notes from 10/01/98 Interview," 1, GY0001055 at GY0001055.

approval. On December 30, 1971, Jenkins received his Ohio waste disposal license from the JCBH.¹³

According to a January 1970 letter from Paul Stull, an engineer involved in designing the landfill, to ODH, JSL began accepting waste from haulers after opening in 1969 "on a truck-load basis," rather than "using the weighing method." The City of Jackson also contracted with Jenkins for waste disposal on a "per residence basis," and delivered "from two—three packer loads a day." Industrial waste dumped at the site included twelve tons daily from the Reynolds Food Company, and between ten and twenty fifty-five-gallon metal drums of acetate weekly from the Goodyear Tire & Rubber Company, which Jenkins "set aside until the acetate residue clinging to the container inside is cool" and then "crushed [and] placed in a cell and covered with other compacted waste." JSL also received two to three small truckloads of "street and alley" waste daily. In total, JSL received twenty to twenty-two tons of waste daily from all sources. ¹⁴ In February, Stull clarified his January statements, writing that the fifty-five-gallon Goodyear drums contained "as much as one gallon" of acetone waste each, which Jenkins emptied "into a cell along with other waste." A scrap metal company then collected the empty drums. ¹⁵

In January 1971, over a year after JSL opened its gates, a local newspaper article noted that "city officials, the health department and everyone else concerned has nothing but praise for the Jenkins Sanitary Landfill operation." JCBH performed regular inspections of JSL, which received garbage from the city of Jackson and from Oak Hill, and the waste of "several large area industrial firms." Individuals could bring waste to the landfill for a fee. The newspaper lauded JSL for ridding the city of its former "filthy, pest-ridden and odorous open dump." ¹⁶

In his 1998 deposition, Fields provided general recollections of JSL's 1969–1972 operations. He was not an employee during that period, but frequented the site. ¹⁷ He listed Goodyear, R. J. Reynolds, the City of Jackson, the Village of Oak Hill, Jackson Corporation, and Purina and Landmark feed mills as entities disposing of wastes at JSL during that period. ¹⁸ He characterized waste from Goodyear as "any bi-product that they would have created from the generation of manufacturing there," and indicated that Goodyear sometimes disposed of ash, and sometimes disposed of non-incinerated wastes, when its incinerator was not functional. ¹⁹ Fields recalled R. J. Reynolds delivering semi-solid waste, consisting of food by-products from which the company had already dumped liquids to the city sewer. He recalled R. J. Reynolds spraying this material with pesticides to keep flies away. The company disposed of approximately twelve tons of waste daily, in

¹³ E. W. Arnold, Director of Health, Ohio Department of Health, to Donald Jenkins, April 16, 1970, GY0029897; Stull, "Report on the Structure and Operational Procedure for Jenkins Sanitary Landfill," 3, GY0028869 at GY0028872; Brinton Allison, Health Commissioner, Jackson County Board of Health, to John Cashman, Director-Designate, Ohio Department of Health, March 2, 1972, GY0028863; Richard Shank, Director, OEPA Southeast District Office, to Karen Wyant Executive Director/Secretary, Jackson Area Chamber of Commerce, December 11, 1987, GY0029154–155.

¹⁴ Paul Stull, P.E., to George Carroll, District Sanitary Engineer, Southeast District Office, Ohio Department of Health, January 21, 1970, GY0028877–878.

¹⁵ Stull, "Report on the Structure and Operational Procedure for Jenkins Sanitary Landfill," February 24, 1970, 3–4, GY0028869 at GY0028872–873.

^{16 &}quot;Nothing but Praise for Jenkins Landfill Operation," [untitled, undated news clipping], GY0028908.

¹⁷ G. Fields deposition, 8–12.

¹⁸ G. Fields deposition, 12–18.

¹⁹ G. Fields deposition, 37–38.

two or three batches.²⁰ The City of Jackson delivered "grit from their sewage plant," and Oak Hill similarly brought "normal waste" and "barrels of grit from their sewage plant." Jackson Corporation, a plastic injection molding company, disposed of boxes of powdered colorants, papers, and plastic beads. Purina and Landmark dumped banding, pallets, and empty pesticide cans.²²

Documents shown to Fields during his deposition indicated that Jenkins used an area of JSL for "hot loads and waste oil." Fields suggested that the "hot loads" may have been Goodyear's ash. Hot loads also may have referred to "smoldering" barrels dumped by individuals, which Jenkins would isolate from other waste to cool. He identified the "waste oil" as "slop" with a high content of cooking oil from R. J. Reynolds, which the company "dumped at the face of the garbage" and landfill staff "contained and soaked up with cover material." Fields explained that an area Jenkins had marked as "a temporary deposit site for hot loads or any unusual but acceptable waste," was used to temporarily store things like animal carcasses, wire fencing, or tree limbs until JSL had enough cover material to "encompass" the items, or until hot items had cooled enough to place in the landfill. Fields noted that he discontinued those practices under his ownership, disposing of unusual items immediately and dumping and monitoring hot loads as they arrived at the landfill. Notably, despite Fields's contention that "hot loads" likely came from Goodyear and that he did not continue use of a temporary holding area when the landfill came under his jurisdiction, a 1986 letter from JCBH President J. Gordon Morrow praised Fields for his practice of allowing OSCO foundry sand to cool before covering it in the landfill.

Jackson County Landfill Operations, 1972-1983

On March 1, 1972, after purchasing the landfill, Fields applied to JCBH to transfer the solid waste disposal license for JSL from Jenkins to himself, and to change the site's name to "Jackson Landfill." He proposed to continue operations as they had been since the landfill opened in 1969. In his approval of Fields's application, Jackson County Health Commissioner Brinton Allison wrote, "this disposal site has been well operated and, to the best of our knowledge, is in compliance with Sections 3734.01 to 3734.11 inclusive of the Ohio Revised Code and also in compliance with Regulations HE-24-01 to HE-24-12 inclusive of the Ohio Sanitary Code relative to the disposal of solid wastes." ODH approved the transfer on March 15, 1972. During the first year of

²⁰ G. Fields deposition, 40–41, 57.

²¹ G. Fields deposition, 41–42.

²² G. Fields deposition, 43–44.

²³ G. Fields deposition, 49–53.

²⁴ G. Fields deposition, 54–55.

²⁵ Gordon Morrow, President, Jackson County Board of Health, to Jerry Roberts, District Representative, Division of Solid & Hazardous Waste Management, Southeast District Office, OEPA, July 18, 1986, SEDO-036319.

²⁶ Allison to Cashman, March 2, 1972, GY0028863; G. Fields deposition, 8, 12; Deposition of Sally Fields, in the United States District Court for the Southern District of Ohio, Eastern Division, The Goodyear Tire & Rubber Company vs. Conagra Foods, Inc., et al., Case No. 2:20-cv-06347-MHW-EPD, January 26, 2023, 17, 20–21.

²⁷ Allison to Cashman, March 2, 1972, GY0028863.

²⁸ T. A. Gardner, Acting Director of Health, Ohio Department of Health, to Brinton Allison, Health Commissioner, Jackson County Health Department, March 15, 1972, GY0028862.

operations, Fields ran the landfill himself. He subsequently hired three employees to oversee many site activities.²⁹

During his time as owner and operator of the site, Fields claimed that he used standard written contracts with Jackson County Landfill (JCL) patrons, containing a clause that prohibited disposal of hazardous material. He was unable to recall exact wording or provide a copy of such a contract during his 1998 deposition. He further stated that if JCL staff noted the presence of something unacceptable in a delivery they would reject it, but that the burden was generally on the waste producer to avoid disposing of hazardous materials.³⁰ JCL records, mainly consisting of tickets issued for deliveries upon entry to the landfill, typically noted the company or dumper and the quantity of waste, but not the type of waste.³¹ Fields claimed that JCL usually did not place full or intact barrels in the landfill, but crushed them and mixed them and their contents with cover material.³²

In 1974, Fields continued to operate ICL under the jurisdiction of the ICBH. According to a survey by Jerry Roberts, a solid waste scientist with the Ohio Environmental Protection Agency (OEPA), completed in May of that year, the landfill received waste Monday through Saturday and typically had two employees on-site. It received around 250 cubic yards of waste daily. Of this total, approximately fifty percent was industrial waste, twenty-five percent household waste, twenty-three percent commercial waste, one percent agricultural waste, and one percent hazardous or toxic waste, in the form of "resin/laquer [sit] thinner/acetone mixture." The landfill site measured 96.5 acres, of which more than 85 acres remained to be filled, which would take an estimated fifteen years and nine months. Roberts assessed past operations as "good," and rated operations in May 1974 a nine out of ten. "Special problems" included a "small amount of leachate," which Roberts characterized as being "no immediate problem"; small quantities of litter; birds feeding in areas where cover material had eroded; inadequate cover in areas, which ICL staff planned to repair; and difficulty reaching the site in inclement weather, which Fields had built an "alternate dumping area" to address.³³ During his 1998 deposition, Fields stated that the twenty-three percent commercial waste would have included waste from "fast food, drug stores, dry good stores" and other businesses in Jackson. Fields did not recall giving Roberts information about resin, acetone, or lacquer thinner being received at JCL.³⁴

In 1984, Goodyear recalled to OEPA that it disposed of "waste acetone mixture," "waste paint mixture," and "waste styrene mixture," consisting collectively of acetone, polyester resin, cyclohexanone, dichloromethane, isobutyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, toluene, xylene, and styrene, at JCL. Wastes arrived at the landfill in fifty-five-gallon steel drums. Goodyear stated that it did not have a written agreement or contract for the waste disposal. It continued to dispose of waste at the landfill until November 1980. In total, Goodyear estimated that

²⁹ G. Fields deposition, 19; S. Fields deposition, 22–32.

³⁰ G. Fields deposition, 20–26; "Notes from 10/01/98 Interview," 1, GY0001055 at GY0001055. Documents refer to the landfill site as Jackson Landfill, Jackson Sanitary Landfill, and Jackson County Landfill. For the sake of clarity, this report uses Jackson County Landfill (JCL) throughout.

³¹ G. Fields deposition, 27–28.

³² "Notes from 10/01/98 Interview," 1, GY0001055 at GY0001055.

³³ Jerry Roberts, "Solid Waste Disposal Questionnaire: Jackson Landfill," I.D. No. SW40-1, May 16, 1974, GY0028854–859.

³⁴ G. Fields deposition, 71–73.

It sent 5,772 barrels of waste to JCL between 1974 and 1980.³⁵ During a 1985 interview with Paula Ventura, from OEPA contractor Ecology and Environment, Inc., Fields confirmed that he had ceased accepting drummed waste from Goodyear in 1980. In 1985, Fields claimed that JCL dried the contents of the drums before mixing them with soil and crushing the empty drums. While he did not dispute the 5,772-barrel number, he felt that was "not a fair representation of waste amount," because many of those barrels were "either partially full or empty." During her site inspection, Ventura also noted that "hydraulic oil was spread onsite for dust control." In Fields's 1998 deposition, he objected to the barrel count more strenuously, contending that it was generated by Goodyear using imprecise and faulty calculations, and was not based on an actual count of barrels. He stated that he did not know the contents of Goodyear's waste. As to disposal practices, Fields testified that JCL staff crushed the barrels when they arrived and material inside "was sprayed out onto the dirt," which staff spread over the garbage. He also claimed not to know the origins of the hydraulic oil and denied using it for dust control regularly. He did, however, suggest that it was possible it happened at times. Descriptions of the hydraulic oil and denied at times.

A document on "Jackson Sanitary Landfill" letterhead listed barrels received by the landfill in 1977. In total, it received 1,030 barrels during that year, ranging from 0 to 522 in any given month, and averaging 86 per month. ⁴⁰ During his 1998 deposition, Fields stated that he did not recognize the document, but acknowledged that someone employed by JCL may have produced it. Fields again called the barrel count into question, pointing out a lack of "ticket numbers" on the document. He claimed not to know how a JCL employee would have provided a barrel count, since JCL did not keep records of that nature, beyond "disposal tickets."

Another OEPA survey in November 1977, completed by David Kral, noted that the approximately one hundred-acre JCL had eighty acres left to fill. If it continued to fill 1.5 acres annually, it would take more than thirty years to reach capacity. The site had three employees on-site at any given time, and accepted approximately 410 tons, or 1,640 cubic yards, of waste per week. Roughly thirty percent of that was household waste. Kral characterized 0.5 percent as "sludge" composed of "p[a]int residue mixed with oil, water, cleaning materials." The remaining 69.5 percent comprised commercial, agricultural, industrial, institutional, and construction waste and demolition debris in unspecified quantities. Surrounding counties had begun sending waste to the site. Gallia County contributed eighteen cubic yards daily; Vinton County, eighteen cubic yards weekly; and Ross County, ten yards weekly. Jackson County contributed the remainder of the county waste. Kral

³⁵ F. C. Betzhold, Environmental Protection, Goodyear Tire & Rubber Company, to Ben Pfefferle, III, Attorney, OEPA re: Jackson Sanitary Landfill, June 4, 1984, GY0029078–132. According to the cited source, Goodyear estimated a total of 875 barrels in 1974; 1,035 in 1975; 436 in 1976; 968 in 1977; 831 in 1978; 738 in 1979; and 889 in 1980. "The quantities were arrived at by taking the percentage of the material generated between 1981 and 1984 on the Hazardous Waste Manifests and calculating backwards to get the estimated quantities of each of the waste streams generated between 1974 and 1980."

³⁶ Paula Ventura, Ecology and Environment, Inc., Memorandum to File, June 14, 1985, GY0028999; and Paula Ventura, "Potential Hazardous Waste Site / Site Inspection Report," March 28, 1985, GY0029000–9015.

³⁷ G. Fields deposition, 114–15.

³⁸ G. Fields deposition, 62–64. In addition to Fields's deposition, see "Notes from 10/01/98 Interview," 2–3, GY0001055 at GY0001056–57.

³⁹ G. Fields deposition, 120–21.

⁴⁰ Jackson Sanitary Landfill, "Barrels -- 1977," circa 12/31/1977, GY0028852.

⁴¹ G. Fields deposition, 125–31.

characterized JCL's operations as "satisfactory," but noted that "barrels of industrial wastes are received without plan approval." Reviewing the 1977 survey during his 1998 deposition, Fields indicated that estimate of 69.5 percent "commercial, agricultural and industrial, institutional waste" was "probably" correct, but that he did not recall what the notation of 0.5 percent sludge might have been referencing. 43

Describing ICL's business in the late 1970s and early 1980s at his deposition, Fields noted that sometime between 1975 and 1980, Banquet Foods became Jeno's, which "would have been a major, major, major account." As Banquet, the company disposed of food processing wastes, like boxes, banding, pallets, potatoes, and creamed corn. Jeno's would have similarly dumped "sludge" consisting of dough, creamed corn, or chicken. Fields explained that the Jeno's waste also could have included sludge from the company's waste-treatment plant. 44 Fields believed the only barrels at ICL would have come from Goodyear, or from individual haulers, and claimed that after reports like the 1977 survey, he became stricter in what JCL would receive from Goodyear, refusing all barreled wastes when Goodyear would not be provide information about the contents. 45 He noted that waste from Camsco, a mushroom farm, consisted of manure and mushrooms. Waste from OSCO included "sand," comprising "dust from their dust collectors, anything that would come out of a small foundry." Fields stated that JCL received waste from OSCO "from whenever the [OSCO] plant started," which he recalled as being sometime in the 1970s. He claimed that until state inspectors questioned the waste, Fields did not request specific information about its contents. As with Goodyear, Fields asserted that he requested more detailed information about OSCO wastes in the "later years," which he estimated as being "in the '80s." ⁴⁶ JCL received manufacturing waste from Federal Mogul, a bearings manufacturer, which sometimes included containers of sludge, the nature of which Fields did not know. 47 Robbins & Myers, a manufacturer of "hunter fans," primarily sent cardboard, Fields recounted. Merillat mainly sent sawdust, pallets, banding, and warehouse materials. He stated that Merillat wastes likely included tannic acid.⁴⁸ Plierico sent empty bags and cardboard. Shelf manufacturer Frick and Gallagher dumped paint scrapings and cardboard at JCL for approximately three to four years in the late 1970s or early 1980s. Monally Pittsburgh, a steel fabricator, disposed of "typical dock waste." 49

On May 11, 1978, David Kral of OEPA again visited JCL to complete a Solid Waste Disposal Survey. Kral noted "approximately one dozen barrels containing questionable liquids" at the site,

⁴² David Kral, "Solid Waste Disposal Questionnaire: Jackson County Landfill," November 17, 1977, GY0028847–851.

⁴³ G. Fields deposition, 74–75.

⁴⁴ G. Fields deposition, 76–77, 92–93. In addition to Fields's deposition, see "Notes from 10/01/98 Interview," 4, GY0001055 at GY0001058; and S. Fields deposition 30(b)(6), 35–36.

⁴⁵ G. Fields deposition, 77–79, 87–89.

⁴⁶ G. Fields deposition, 94–96. In addition to Fields's deposition, see "Notes from 10/01/98 Interview," 4, GY0001055 at GY0001058. In 2023, OSCO admitted that it hauled waste to JCL between approximately 1970 and 1987, including "spent foundry sand, slag, baghouse dust and general trash." See OSCO Industries, Inc., Responses to Goodyear's Second Set of Discovery Requests, in the United States District Court for the Southern District of Ohio, Eastern Division, The Goodyear Tire & Rubber Company v. Conagra Foods, Inc., et. al., Case No. 2:20-CV-6347, 6–7.

⁴⁷ G. Fields deposition, 96–97.

⁴⁸ G. Fields deposition, 97–98; "Notes from 10/01/98 Interview," 3–4, GY0001055 at GY0001057–58.

⁴⁹ G. Fields deposition, 99–100. In addition to Fields's deposition, see "Notes from 10/01/98 Interview," 3–4, GY0001055 at GY0001057–58.

and noted that JCL did not have approval to receive "any liquids, toxic, hazardous or semi solid wastes." Kral advised Jackson County Health Commissioner Carl Greever to inform Fields that he must "stop receiving all such wastes immediately." Shortly after this survey, on May 17, Jerry Roberts of OEPA also wrote separately to Goodyear and RJR Foods Incorporated to inform the companies that they might be required to change their waste disposal practices. Roberts explained,

although industrial wastes of what appear to be a hazardous, toxic, liquid, or semi-solid nature generated at your facility have been disposed of at the Jackson Landfill for a period of years, you may be in violation of certain sections of Public Law 94-580. Since the Jackson Landfill referenced above is not approved to receive those types of wastes mentioned, the Ohio EPA respectfully recommends that an alternative method of treatment and/or disposal of your industrial wastes be considered.⁵¹

Roberts reportedly sent a similar letter to Banquet Foods, but that letter is not included in documents collected, and it is therefore unclear if it pertained to waste disposal at JCL, or at a different waste disposal site.⁵²

On May 22, 1978, Charles Terry, a sanitary administrator at JCBH, wrote to Donald Day, chief of the Office of Land Pollution Control at OEPA, regarding Roberts's letters to the companies. Terry emphasized the efforts to which Jackson County had gone to comply with solid waste laws, by closing open dumps, establishing landfills, and impressing upon industries to use those landfills rather than burning or dumping solid wastes. Terry lamented, "now it appears that we have led them into becoming violators of P.L. 94-580." He explained that he expected that the three companies would take the violation seriously and would stop using the disposal sites at significant cost. He also noted that landfill operators "have cooperated to the very greatest extent possible" to maintain their sites, also at a high cost. Terry requested a copy of P.L. 94-580. He also asked for clarification about how each company had violated that law. He questioned why "plain garbage of vegetable and animal origin" from RJR Foods; "acetone ... combined with common equipment soil" from Goodyear; and grease from Banquet were in violation of the law. 53 Documents collected do not reveal a resolution to this issue.

In September 1979, Fields wrote to OEPA requesting a site investigation. Fields had received a query from Allied Chemical regarding disposal of "alum sludge material in a semisolid state" at JCL. Fields explained, "it is our hopes [sii] that we may handle this material with an approved method by EPA." OEPA inspected a site directly southwest of JCL, and discussed Fields's disposal plans, which included spreading the sludge on a sloped area and covering it with strip mine spoils. OEPA

OEPA, September 10, 1979, GY0028842.

⁵⁰ David Kral, Environmental Technician, Office of Land Pollution Control, OEPA, to Carl Greever, Health Commissioner, Jackson County Health Department, May 22, 1978, GY0028846.

⁵¹ Jerry Roberts, Sanitarian, Office of Land Pollution Control, Southeast District, OEPA, to R. L. Hively, Manager of Engineering, Goodyear Tire & Rubber Company, May 17, 1978, GY0028845; Jerry Roberts, Sanitarian, Office of Land Pollution Control, Southeast District, OEPA, to Albert Schuchardt, Plant Manager, R.J.R. Foods Incorporated, May 17, 1978.

⁵² Charles Terry, Sanitarian Administrator, Jackson County Board of Health, to Donald Day, Chief, Office of Land Pollution Control, OEPA, May 22, 1978.

⁵³ Terry to Day, May 22, 1978.

⁵⁴ J. Gregory Fields to Stephan Hamlin, Section Chief, Office of Land Pollution Control, Southeast District Office,

rejected both the site and the disposal method, deeming the site too small, and the disposal method insufficient to prevent the liquid sludge from leaching. OEPA recommended that Fields select a different site with the assistance of a professional engineer.⁵⁵

In March 1982, Fields applied for a Permit to Install (PTI) for the Allied Chemical alum sludge on behalf of his company, Sanitary Commercial Services, Inc. (SCS), at the existing JCL site. The application outlined a plan to blend alum mud (defined as "the insoluble residue from aluminum sulfate manufacture") with "general refuse in the active working area" in a ratio of ten parts refuse to one part alum mud. JCL expected to receive twenty-five to fifty cubic yards of alum mud daily. In mid-March, OEPA's Roberts reported on Fields's application, "for landfilling 7000 cubic yards of alum sludge waste per year." He noted that JCL had a "satisfactory compliance record," and recommended approval of the PTI. He cautioned that the "sludge" was "a low level hazardous waste" and must be properly mixed and disposed of in accordance with the permit. OEPA approved the application on April 16, 1982. In Fields's 1998 deposition, he indicated that, despite having the permit, JCL never received any alum sludge.

In early 1981, Fields received another request for waste disposal, this time from the City of Jackson's sewage treatment plant. The plant's digesters were not functioning, leaving the City with up to one hundred truckloads of sludge, which it wanted to bring to JCL. OEPA rejected the request, explaining to Fields that he could not take "wet sludge," and that, even if dried, Fields would need a PTI for its disposal. Documents reviewed do not include any further activity on this issue.

In 1982, Ross County, Ohio, commissioned a solid waste management study, with contractor Hurley, Schnaufer & Associates, which included a status report on landfills in Ross and Jackson Counties. The study contained an assessment of JCL. Fields had apparently reported to the contractor that JCL could handle an increased waste load, that his current permit did not expire until approximately 1990, and that the landfill likely had an existing lifespan of approximately ten years. Steve Hamlin, of OEPA, however, reported that JCL was "running out of room." According to Hamlin, by 1982, JCL received between 250 and 500 cubic yards, or 80 to 160 tons daily; the original

⁵⁵ Steve Hamlin, Section Chief, Office of Land Pollution, OEPA, to J. Gregory Fields, Jackson Sanitary Landfill, October 26, 1979, GY0028841.

⁵⁶ Sanitary Commercial Services, Inc., "OEPA Application for Permit to Install," March 1, 1982, GY0028831–836. The document further described the creation of alum mud at Allied Chemical's Chillicothe, Ohio, facility: "At Chillicothe, bauxite is reacted with sulfuric acid to dissolve the soluble material, primarily aluminum. The resulting liquor is decanted for further processing to make a final quality product. The remaining undissolved solids are washed five times with fresh water to recover all remaining dissolved materials and the wash water becomes part of the product. The clean solids are pumped to a pond where they are temporarily accumulated. After filling with solids, the pond is allowed to dry out. A full pond contains approximately 3500 cubic yards of alum mud which must be dug out and transported by truck to a permanent disposal site every 18 to 24 months."

⁵⁷ OEPA, "Report on Permit to Install for Allied Chemical Alum Sludge at Jackson Sanitary Landfill Jackson County," March 15, 1982, GY0028821–822; and "Solid Waste Plan Approval Worksheet: Modification to Landfill Operations for Disposal of Semi-Solid Waste, Jackson Sanitary Landfill," March 15, 1982, GY0028823–828.

⁵⁸ Environmental Board of Review, OEPA, to J. Gregory Fields, April 16, 1982, GY0029909–914.

⁵⁹ G. Fields deposition, 143–44.

^{60 &}quot;Ohio Environmental Protection Agency Telephone Memorandum," Call with Greg Fields, March 30, 1981, GY0028838.

⁶¹ David C. LaValle, Hurley, Schnaufer & Associates, to Steve L. Hamlin, P.E., Section Chief, Office of Land Pollution Control, OEPA, December 30, 1982, GY0028813–815.

JSL permit allowed only 25 tons of waste daily. Hamlin expressed concern that Fields had not obtained a permit for the increased waste load, and believed JCL would be at capacity in three to five years, if not sooner.⁶²

In March 1983, Fields applied for an OEPA PTI, on behalf of SCS, to receive "non-hazardous" semi-solid waste. Although it was a general application, Fields noted that the first such waste received by the landfill would come from the Jeno's plant in Wellston, Ohio. He proposed blending the semi-solid waste with "general refuse" at a one-to-ten ratio. The Jeno's waste would consist of forty to sixty cubic yards daily of "32 to 35 percent dry solid sludge cakes," delivered to JCL for a two-week period. Hamlin reported on the application, writing, "present landfill operations are not considered to be in substantial compliance with Ohio Administrative Code 3745." He explained, "the landfill has been improperly drained and graded resulting in steep outslopes, ponding and resultant leachate discharges." He recommended that OEPA approve the permit, but that JCL not accept semi-solid waste "until compliance is achieved and certified in writing by both the Jackson County Board of Health and the Southeast District Office of the Agency [OEPA]." 1975.

OEPA approved the PTI in late March, with appended "conditions." The conditions dictated that Fields comply with Rule 3745-27 of the Ohio Administrative Code (OAC) in operating and maintaining JCL; that he maintain daily operational records and provide them to OEPA on request; that any leachate discovered on-site posing a threat of water pollution be contained, treated, or removed; that semi-solids be blended at a ratio of one-to-ten with solid waste and "distributed equally throughout the day"; that semi-solids meet the definition within the OAC; that no liquid or hazardous waste be accepted by ICL; and that no semi-solids beyond those from Jeno's be accepted without written OEPA authorization. 65 Additionally, the approval included a "special condition" relative to JCL's noncompliance with OAC 3745. Specifically, operations were "not being conducted in strict compliance with approved detail plans, specifications and information." OEPA had also found leachate on the site, which threatened water pollution. JCL also lacked appropriate grading "to insure [sii] minimal percolation of water through the cover material" and minimize erosion, and erosion had occurred in waste disposal areas. The conditions concluded, "until substantial compliance is achieved, with respect to the above cited Sections and all other Sections of the Ohio Administrative Code 3745, this landfill is not authorized to receive semi-solid waste materials for disposal." Both the OEPA and JCBH would need to certify compliance. 66 Fields withdrew his application in April.⁶⁷

⁶² Stephen Hamlin, Division of Land Pollution Control, Southeast District Office, OEPA, to David La Valle, Hurley, Schnaufer & Associates, Community Development Consultants, January 6, 1983, GY0028811–812.

⁶³ Sanitary Commercial Services, Inc., "OEPA Application for Permit to Install," March 14, 1982, GY0028795-805.

⁶⁴ Stephen L. Hamlin, P.E., Unit Supervisor, Division of Land Pollution Control, Southeast District Office, OEPA, "Report on Application for Permit to Install to Allow Disposal of Semi-Solids at the Jackson Sanitary Landfill, Jackson County," circa March 1983, GY0028787–788.

⁶⁵ Solid Waste, PTI Worksheet, PTI Application No. 06-1012, Jackson Sanitary Landfill, March 1983, GY0028789–794. The Ohio Administrative Code defined semi-solid waste as waste "that while cohesive and viscous it slowly flows or loses its shape when unconfined and does not readily release liquids under normal climatic conditions." See cited document at GY0028794.

⁶⁶ Solid Waste, PTI Worksheet, PTI Application No. 06-1012, Jackson Sanitary Landfill, March 1983, GY0028789–794.

⁶⁷ Stephen L. Hamlin, P.E., Unit Supervisor, Division of Land Pollution Control, Southeast District Office, OEPA, to Sanitary Commercial Services, Inc., Attention: J. Gregory Fields, April 7, 1983, GY0028771.

Fields submitted another application to receive semi-solid wastes at ICL in June, similar to the March application, but omitting specific mention of Jeno's waste. In the application, Fields noted his intent to submit summaries of each semi-solid to OEPA for approval in advance. 68 Hamlin noted that the application did not involve changes to the landfill's physical structure and would not disrupt normal operations. He recommended approval, noting that "modification of the operations to allow disposal of semi-solids in the manner proposed should not cause water pollution or create a nuisance or a health hazard." The approval carried the same "Conditions" as the March approval, but did not include the "special condition," making no mention of JCL's noncompliance with OAC 3745.69 OEPA issued the PTI on June 30, 1983.70 In August, Fields requested and received permission from OEPA to dispose of wastes under the new PTI, consisting of "10 cubic yards/month of scrubber sludge" from Wear-Ever Aluminum, Inc. in Chillicothe, and "2-3 tons/day of Hog paunch contents" from The Collins Packing Company in Greenfield. 71 In May 1984, Fields applied to OEPA to dispose of wastes from Wear-Ever Aluminum, Inc., in Chillicothe at JCL or at Wellston Sanitary Landfill. 72 In June, Michael Nihiser, an environmental scientist with OEPA, approved Fields's request to dispose of the "dewatered sludge cake" at JCL, under the existing PTI for semi-solid wastes. 73 During his 1998 deposition, Fields acknowledged that JCL received these wastes.⁷⁴ However, in the same deposition, Fields inexplicably claimed that he did not recall JCL accepting any semi-solid wastes under the PTI.75

Jackson County Landfill Operations, 1983-1987

Beginning in approximately 1983, OEPA inspections of JCL began to uncover more serious issues at the site and a contentious relationship formed between Fields and OEPA.

On July 26, 1983, Nihiser conducted a survey of JCBH's Solid Waste Disposal Program. He submitted his "findings and recommendations" to JCBH on August 29, reporting several issues at JCL. Nihiser noted that "solid waste is not being covered daily with six inches of soil." He also explained that finished areas were not "seeded within 60 days of reaching final elevation," which needed to be corrected by October 1. He wrote that the approved landfill area was nearing capacity and that Fields should apply to expand the new site or locate a new site. Due to listed issues at both JCL and Wellston Landfill, Nihiser declined to recommend Jackson County's Solid Waste Disposal

⁶⁸ Sanitary Commercial Services, "OEPA Application for Permit to Install," June 20, 1983, GY0028764–770.

⁶⁹ Stephen Hamlin, Division of Land Pollution Control, Southeast District Office, OEPA, "Report on Application for Permit to Install to Allow Disposal of Semi-Solids at the Jackson Sanitary Landfill, Jackson County"; and "Solid Waste PTI Worksheet," PTI Application No. 06-1072, Jackson Sanitary Landfill, GY0028757–763.

⁷⁰ Robert Maynard, Director, OEPA, "Permit to Install," Application No. 06-1072 for Sanitary Commercial Services, Inc., June 30, 1983, GY0029924 at GY0029926; Steven Hamlin, Unit Supervisor, Division of Land Pollution Control, Southeast District Office, OEPA, "Report on Application for Permit to Install to Allow Disposal of Semi-Solids at the Jackson Sanitary Landfill, Jackson County," circa June 1983, SEDO-038800–805.

⁷¹ Michael Nihiser, Environmental Scientist, Division of Solid & Hazardous Waste Management, Southeast Division, OEPA, to J. Gregory Fields, Sanitary Commercial Services, August 16, 1983, GY0028756.

⁷² J. Gregory Fields, President, SCS, to Michael Nihiser, Environmental Scientist, OEPA, Southeast District Office, May 29, 1984, GY0029134.

⁷³ Michael Nihiser, Environmental Scientist, OEPA, Southeast District Office, to Sanitary Commercial Services, June 1, 1984, GY0029133.

⁷⁴ G. Fields deposition, 145.

⁷⁵ G. Fields deposition, 144–45.

Program for inclusion on OEPA's "director's approved list." He planned to conduct a follow-up survey in October. On August 31, Fields replied to the OEPA survey, vigorously disputing its findings. Regarding JCL, Fields claimed that solid waste was covered with six inches of soil every twenty-four hours; that final elevations had not been reached, negating the need for seeding; and that "the generalized statement of the landfill's rate of filling is in error." Fields stated that he had already had discussions with several individuals, including Nihiser and Steve Hamlin, about the possibility of expanding the site. Fields concluded:

In summary, we are concerned that the lack of consideration for the correct operational procedures we follow and the constant criticism of potential problems as Mr. Nihiser views them has brought us to the point that we question his motives when reviewing the solid waste programs as we know them in southern Ohio.⁷⁷

Nihiser apparently continued to visit and evaluate the facility, because in April 1984, Fields wrote to Donald Day, chief of OEPA's Division of Land Pollution Control, to complain about his assessments. On April 17, Fields reported to Day that Nihiser had made two surprise inspections of JCL since March 20, 1984, but that Fields had not received a report of either visit. No April 25, Fields wrote to Day, "it is with continued concern that we proceed with our reclamation efforts at these sites." He protested that Nihiser "has failed to include our efforts and progress in his reports," and noted that he had not received feedback from Nihiser's last three visits. He then listed improvements made at JCL, including a road change, movement of dirt, collection of cover material, and increase in both staff and equipment.

In August 1984, OEPA investigated JCL as a potential hazardous waste site. Marilyn McCoy-Zumbro from the Division of Solid & Hazardous Waste Management made the initial assessment. She wrote, "operational problems have plagued the site throughout its history with county program currently under notice by a Director's warning letter." OEPA had noted leachate discharging to a Little Salt Creek tributary "on numerous occasions." She noted that "information from one known generator" suggested that it had sent over "5700 drums" to JCL—almost certainly a reference to Goodyear. An unnamed "second generator" had also disposed of "large quantities of 'petroleum waste products – liquid' at the site." McCoy-Zumbro stated that JCL should not be accepting waste from either contributor under its operating permit. The effect of JCL's operations on groundwater was not clear, but she suggested, "additional information is needed on the other potential generators and groundwater supply use in the area." An attached form completed by McCoy-Zumbro listed 5,459 drums of "solvents" and 313 drums of styrene (presumably the Goodyear wastes); and 1.6 tons annually of "paint sludge" and 27,000 gallons annually of "petroleum waste products – liquid,"

⁷⁶ Michael Nihiser, Environmental Scientist, Division of Solid & Hazardous Waste Management, Southeast Division, OEPA, to Jackson County Board of Health, August 29, 1983, GY0028755.

⁷⁷ J. Gregory Fields to Southeast District Office, OEPA, August 31, 1983, GY0028753–754.

⁷⁸ J. Gregory Fields to Donald E. Day, Chief, Division of Land Pollution Control, OEPA, April 17, 1984, GY0028741.

⁷⁹ J. Gregory Fields to Donald Day, Chief, Division of Land Pollution Control, OEPA, April 25, 1984, GY0028743-744

⁸⁰ Marilyn McCoy-Zumbro, "Preliminary Assessment Review, Jackson Sanitary Landfill," August 1, 1984, GY0029064.

presumably from the unnamed second contributor.⁸¹ In his 1998 deposition, Fields denied precise knowledge of the 1.6 tons of paint sludge, but believed it would have come from Goodyear, Frick Gallagher, and Wellston Aerosol.⁸² He contended that the 27,000 gallons of oil waste would have come from R. J. Reynolds but argued that there were "no petroleum manufacturers anywhere near us" and that he did not recall any petroleum wastes. He also denied knowledge of the styrene drums and their origins. He claimed no testing or knowledge of specific substances brought to JCL, and therefore argued he could not speak specifically to the acetone, xylene, toluene, or styrene.⁸³

In March 1985, Paula Ventura and Chris Nolan, with Ecology and Environment, Inc., and under contract with OEPA, inspected JCL as a potential hazardous waste site and met with Fields. Ventura noted that they had "observed leachate seeps near the mine spoils walls," but had not taken samples.⁸⁴ On April 11, 1985, Nihiser completed a violation notice for JCL, listing issues in several areas, including lack of compliance with approved plans, litter control, insufficient depth for daily cover, insufficient final cover, and unsuitable cover material. He elaborated, noting that solid wastes "must be covered daily with 6 inches of low permeability soil," and that "finished areas" should be covered with two feet of the same and seeded. He claimed that "a large area of the landfill west of the present working face" had been covered with permeable, sandy soil. He wrote that JCL should "minimize blowing and scattered litter." He also noted the authorized "finished contours" in JCL's "detailed plans," and stated that a survey was needed "to insure [sii] compliance." On May 10, Nihiser wrote to Fields about his April 11 inspection. He stated that, at JCL, Fields was "landfilling an area approximately the size of a football field to a depth of 6-8 feet and then applying final cover." He mentioned the need for daily soil cover and noted that the final cover west of the active working area was a non-compliant, permeable, sandy soil. He noted spots in another finished area where "vegetation was thin or nonexistent," attributable to coal particles in the cover materials, which Fields needed to reseed. He found "a small leachate spring in the closed section of the landfill," but noted that "the worst of the leachate discharges have been eliminated." He asserted the need for better control of scattered litter and reiterated the need to have a topographic survey of JCL. Nihiser suggested that he and Fields meet to discuss violations at JCL and at Wellston Landfill.86

A significant issue raised by OEPA was that Fields was operating JCL beyond its approved boundaries. Expansion of operations required a PTI, which Fields had not secured. The landfill should have closed when it reached its approved boundaries. Fields had begun exploring expansion of JCL, accepting an initial proposal from engineering and architectural contractor Burgess & Niple, Limited, in March to examine its feasibility, but had not yet applied for a PTI at the time of OEPA's

⁸¹ Marilyn McCoy-Zumbro, "Jackson Sanitary Landfill, Potential Hazardous Waste Site, Preliminary Assessment," August 1, 1984, GY0029065–069.

⁸² G. Fields deposition, 115-17.

⁸³ G. Fields deposition, 117–20.

⁸⁴ Paula Ventura, Ecology and Environment, Inc., Memorandum to File, June 14, 1985, GY0028999; and Paula Ventura, "Potential Hazardous Waste Site / Site Inspection Report," March 28, 1985, GY0029000–9015.

⁸⁵ Michael Nihiser, Environmental Scientist, "Solid Waste Disposal Facility Violation Notice," Jackson County Landfill, April 11, 1985, GY0029025–027.

⁸⁶ Michael Nihiser, Environmental Scientist, OEPA, Southeast District Office, to J. Gregory Fields, Sanitary Commercial Services, May 10, 1985, GY0029021–023.

investigation.⁸⁷ On April 15, 1985, OEPA issued Findings and Orders revoking Jackson County's solid waste program's authority, because JCBH had failed to enforce regulations at JCL. This gave OEPA direct jurisdiction and more direct oversight at JCL. Jackson County appealed the Findings and Orders.⁸⁸ Fields wrote to Nihiser on May 16, stating his intent to cooperate and meet OEPA requirements. He expressed concern, however, about the April 15 Findings and Orders and his inability to address the issues discovered during the April 11 inspection before their issuance.⁸⁹ On May 21, Nihiser assured Fields that he had thirty days from receipt of the May 10 letter to address issues.⁹⁰

Nihiser inspected again in July, forwarding violation notices to Fields in August. He indicated that Fields did not apply daily soil cover to wastes as required, and that a landfill supervisor had cited equipment failure as the cause. Nihiser marked another violation for the lack of backup equipment. He also listed lack of seeding in three to five acres of the landfill, which led to erosion. Nihiser noted that JCL planned to seed in the fall, according to a landfill supervisor. Nihiser also reiterated the need for a topographical survey of the landfill. Also in August, Nihiser visited the nearby Lake Katherine Nature Preserve and observed that runoff from JCL had caused erosion there and found that landfill sediments had collected in Little Salt Creek, which ran alongside both JCL and the nature preserve. He also found "solid waste, paper and plastic" from JCL on the preserve. He recommended that Fields add sediment fences and seed "all exposed soil areas of the landfill to a dense vegetative cover." In response to the violations noted during the July inspection, Fields informed Nihiser that JCL did, indeed, have standby equipment and assured him that "the plan for seeding and erosion control is a major concern to our operations," and that he had "made major strides to reclaim finished areas."

The same month, Fields wrote to Steve Hamlin, forwarding a plan to expand JCL. He expressed the desire to gain approvals in under two years, and asked Hamlin how to expedite the matter. 94 However, just prior to receiving Fields's letter, OEPA had received topographical maps of JCL and Wellston Landfill from Burgess & Niple. Hamlin found that the maps were not drawn as specified and lacked markings for the "originally approved final topography" of the sites. OEPA used the maps to check existing elevations against the plans. Hamlin wrote that JCL was "not in compliance

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⁸⁷ Richard Shank, Director, OEPA Southeast District Office, to Karen Wyant, Executive Director/Secretary, Jackson Area Chamber of Commerce, December 11, 1987, GY0029154–155; Burgess & Niple, Limited, "Proposals and Qualifications, Expansion of Jackson Landfill," March 1985, GY0029946.

⁸⁸ Shank to Wyant, December 11, 1987, GY0029154–155; "Notes from 10/01/98 Interview," 5, GY0001055 at GY0001059.

⁸⁹ J. Greg Fields, President, Sanitary Commercial Services, to Michael Nihiser, Environmental Scientist, OEPA, Southeast Division, May 16, 1985, GY0029017.

⁹⁰ Michael Nihiser, Environmental Scientist, OEPA, to J. Gregory Fields, President, Sanitary Commercial Services, Inc., May 21, 1985, GY0029016.

⁹¹ Michael Nihiser, Environmental Scientist, OEPA, Southeast District, to J. Gregory Fields, Sanitary Commercial Services, Inc., August 19, 1985, GY0028991–992.

⁹² Michael Nihiser, Environmental Scientist, OEPA Southeast District Office, to J. Gregory Fields, Sanitary Commercial Services, Inc., August 19, 1985, GY0028989–990. For the location of the nature preserve relative to JCL, see OEPA, "Decision Document for the Remediation of the Jackson County Landfill, City of Jackson, Jackson County, Ohio," September 2015, GY0069150.

⁹³ Greg Fields, Sanitary Commercial Services, Inc., to Michael Nihiser, Ohio EPA, September 6, 1985, GY0028981.

⁹⁴ Greg Fields, Sanitary Commercial Services, Inc., to Steve Hamlin, OEPA, August 30, 1985, GY0028982.

with approved plan elevation," finding two areas ten to twenty feet higher than allowed. The maps also showed "some landfilling has taken place outside of approved boundaries." Hamlin concluded that "little or no additional approved capacity is available for future operations." "95

On November 1, 1985, OEPA, JCBH, and SCS reached a settlement agreement, following review of the County's appeal of the April 15 Findings and Orders. ⁹⁶ The settlement agreement also returned the Jackson County Combined General Health District to OEPA's "list of health districts administering and enforcing solid waste disposal programs" and provided Fields deadlines for compliance with state solid waste laws. ⁹⁷ Generally, the November 1 agreement allowed Fields to apply for a PTI to legalize his expansion of JCL, while continuing operations within the original landfill boundaries. It included stipulations for the steps in the PTI application process. It required Fields to "contract with a consulting engineer by September 17, 1985," and complete a preliminary site evaluation by November 1. Hydrogeological studies of JCL were due to OEPA by March 3, 1986; preliminary engineering plans by September 1; and finals plans and a PTI application by March 1, 1987. OEPA would only grant deadline extensions for inclement weather. ⁹⁸

Later in November, Hamlin wrote to Fields regarding the JCL expansion. He expressed concern that a portion of the proposed expansion might fall within one thousand feet of water wells, and that the proposed expanded area would drain to Little Salt Creek. The expansion plan also included "strip mining for coal and landfilling," which would create complicated engineering and permitting processes. He also suggested that there would not be enough suitable cover material available on-site and pointed out the requirement for five feet of "low permeability soil" underlying the landfill area. He concluded that it would not be "practical or reasonable" to expand the site unless Fields addressed the above concerns. He detailed the steps Fields should take to receive OEPA approval, if he decided to move forward, and urged him to contact local officials, who would have influence over approval or denial of a potential landfill. John Noyes of Burgess & Niple wrote to Hamlin in December, complaining that Hamlin had not commented, in his November 18 letter, on an existing proposal for a hydrogeological investigation, required for the JCL expansion. Noyes noted that he planned to address the issues raised in Hamlin's November letter to Fields. He also expressed that he intended to seek additional information from OEPA about the specific water quality criteria for Little Salt Creek.

With expansion plans ongoing, Nihiser inspected JCL again in November 1985, forwarding a list of violations to Fields in late December. He noted open dumping of "foundry sand, fly ash, cardboard, wood scraps, etc." from OSCO Industries in Jackson, adjacent to JCL's "cardboard

⁹⁵ Stephan Hamlin, Unit Supervisor, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, to Fred Weaver, Administrator, Jackson County Health Department, September 4, 1985, GY0028984–985.

⁹⁶ Shank to Wyant, December 11, 1987, GY0029154-155.

⁹⁷ Director's Final Findings and Orders, before the OEPA in the matter of Sanitary Commercial Services, Inc., August 20, 1987, GY0024718.

⁹⁸ Settlement Agreement, Before the Environmental Board of Review, State of Ohio, Jackson County Combine General Health District vs. Warren Tyler, Director of Environmental Protection, Case No. EBR401296-401297, [November 1, 1985], GY0029999 at GY003001–004.

⁹⁹ Stephan Hamlin, Unit Supervisor, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, to Gregory Fields, President, Sanitary Commercial Services, Inc., November 18, 1985, GY0028948–950.

John Noyes, Burgess & Niple, to Stephen Hamlin, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, December 12, 1985, GY0028936–937.

recycling building." Nihiser added that OSCO was a "hazardous waste generator" and that he had recommended to Fields during a December 12 meeting that JCL not accept waste from OSCO until OEPA gathered more information. He wrote that Fields should cover the open dump area with two feet of soil and seed it prior to May 1, 1986. 101

In January, Burgess & Niple submitted a statement of work for the proposed hydrogeologic evaluation of JCL. ¹⁰² In February, OEPA returned comments on the document, making recommendations for how the evaluation should proceed. OEPA again expressed concern about the lack of available cover and liner material for the proposed JCL expansion, informing the contractor, "it is critical that sufficient quality and quantity of material be established as soon as possible." ¹⁰³ In March, Fields applied to OEPA for an extension on the submission deadline for the hydrogeologic study, citing inclement weather. OEPA denied his request but allowed for a shorter extension to April 1. Hamlin warned Fields that "this discretionary action does not relieve you of any responsibility or liability with regard to the requirements of the Settlement Agreement and is not to be interpreted as an extension of a milestone date." ¹⁰⁴

OEPA ultimately received the hydrogeologic study on April 16.¹⁰⁵ However, OEPA Geologist Nancy Henderson identified several issues, including proximity of a residential well to the proposed expansion area, lack of liner and cover material, and inadequacy of both permeability tests and hydrogeologic data needed to evaluate the survey results and determine whether the new area would be in compliance with regulations.¹⁰⁶ On May 27, Jerry Roberts, OEPA district representative, wrote to Fields recommending that, based on OEPA's preliminary assessment and the hydrogeologic survey, Fields cease pursuing site expansion.¹⁰⁷

Nonetheless, Fields continued with the PTI application process. In August 1986, Burgess & Niple submitted preliminary engineering plans for the expansion to OEPA. ¹⁰⁸ In October, Roberts wrote to Fields stating that previously raised points of concern had not been addressed. Although Fields had apparently submitted a letter in September, identifying another source of cover or liner material, he had not submitted data showing that this material would comply with OAC standards. Roberts concluded, "the preliminary plan only proposes to engineer around the site limitations and

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¹⁰¹ Michael Nihiser, Environmental Scientist, Division of Solid & Hazardous Waste Management, Southeast Division, OEPA, to J. Gregory Fields, Sanitary Commercial Services, December 24, 1985, SEDO-039039.

¹⁰² Burgess & Niple, "Proposed Hydrogeologic Evaluation, Jackson Landfill, Jackson, Ohio," ca. January 17, 1986, GY0029291–298.

¹⁰³ Nancy Henderson, Geologist, Division of Water Quality Management & Assessment, OEPA, to John Noyes, Burgess & Niple, February 11, 1986, GY0029286–287.

¹⁰⁴ Stephan Hamlin, Unit Supervisor, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, to J. Gregory Fields, President, Sanitary Commercial Services, Inc., March 6, 1986, GY0029268–269.

¹⁰⁵ Burgess & Niple, Limited, "Hydrogeologic Evaluation of Proposed Landfill Expansion, Jackson Landfill, Jackson, Ohio," March 1986, GY0030005.

¹⁰⁶ Nancy Henderson, Geologist, Division of Water Quality Management & Assessment, OEPA, to Michael Nihiser, OEPA, "Inter-office communication" re: Jackson Landfill Hydrogeologic Report, May 9, 1986, 3, GY0029249 at GY0029251; Burgess & Niple, Limited, "Hydrogeologic Evaluation of Proposed Landfill Expansion, Jackson Landfill, Jackson, Ohio," March 1986, GY0030005.

¹⁰⁷ Jerry Roberts, District Representative, Division of Solid & Hazardous Waste Management, Southeast District, OEPA, to Gregory Fields, President, Sanitary Commercial Services, Inc., May 27, 1986, GY0029247–248.

¹⁰⁸ Jerry Roberts, District Representative, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, to Gregory Fields, President, Sanitary Commercial Services, Inc., October 6, 1986, GY0029194–195.

substitutes burdensome, costly and unpractical construction and operation theory in lieu of good site selection." He once again suggested that Fields drop the issue of JCL expansion, stating that OEPA would recommend denial of the project should Fields submit an application and final plans. ¹⁰⁹

In February 1986, Nihiser initiated a survey of Jackson County's Solid Waste Disposal Program. In March, he informed the county of several violations. In June, Roberts wrote to Health Commissioner Carl Greever, summarizing six violations at ICL and recommending remedies. First, Roberts repeated the issue with OSCO baghouse dust being dumped, uncovered, away from the landfill face. He stated that cover material needed to be added to all wastes daily. Second, JCL had been using cover material "from the highwall area," which was "not approved for use as a low permeability soil." This put JCL in violation of the November 1985 settlement agreement. Roberts suggested that Fields use "the spoil material stockpiled at the west end of the highwall," which would comply with the OAC. Third, although OEPA had not detected significant leachate discharge at the site, "drainage patterns" posed a risk of water pollution. Roberts did not directly suggest a remedy for this issue. Fourth, Roberts again referenced the "uncovered casting sand and baghouse dust" from OSCO. He noted "that these wastes may contain hazardous constituents," which would make ICL "an unpermitted hazardous waste disposal site subject to enforcement action under the Resource Conservation and Recovery Act." He wrote that OSCO should submit waste reports to OEPA, and that Fields should not receive wastes from OSCO in the interim. Fifth, Roberts noted small quantities of "scattered litter" that Fields should remove. Finally, Roberts noted lack of "inclement weather preparation" and "lack of stockpiled cover material," but stated that these items did not appear to affect operations. Roberts recommended that the county inform Fields of violations, provide him a deadline for compliance, and suspend his license if he did not remedy violations. If Jackson County did not follow through with that recommendation, Roberts would recommend disapproval of its Solid Waste Disposal Program to OEPA's enforcement committee. OEPA was on the verge of "invoking the closure stipulation in the Settlemen[t] Agreement," because Fields was "not operating the landfill in accordance with the boundaries as approved by the Ohio Department of Health."¹¹⁰

The following month, J. Gordon Morrow, president of JCBH, replied to Roberts's letter, following a JCBH meeting. He pushed back against Roberts's claims of violations, writing, "your letter mentions items which the board feels are picky and we find your continuous threats of referrals to your enforcement committee recommending disapproval of our program objectionable." He implied that Roberts's letter was retribution for JCBH successfully challenging the prior disapproval. Replying to violations listed in Roberts's letter, Morrow argued that OEPA had determined OSCO's "foundry sand" to be "exempt from the solid waste regulations" per a February 24, 1981, letter. He also claimed that an "EP Toxicity test" from OSCO showed that "all wastes are far below the allowable maximum concentrations." He claimed that JCL set the OSCO waste aside to allow it to cool and prevent it from igniting waste in the landfill. Morrow conceded that Fields was using cover material from beyond the approved site but noted that "this is a practice of most landfills in the state." He also claimed that the cover material was "well within the acceptable limits for permeability" and requested official approval of use of the cover material going forward. In terms of leachate discharge, Morrow reiterated that none was observed and that "a well ran [sic]

¹⁰⁹ Roberts to Fields, October 6, 1986, GY0029194–195.

¹¹⁰ Jerry Roberts, District Representative, Division of Solid & Hazardous Waste Management, Southeast District, OEPA, to Carl Greever, Health Commissioner, Jackson County Health Department, June 16, 1986, SEDO-036313–316.

landfill" with appropriate grades and seeding practices was "the best protection." To the "scattered litter," he wrote that JCBH was "proud that litter was not a major problem," and noted that some "blowing papers" were inevitable at landfills. Morrow argued that Fields was appropriately prepared for "inclement weather" and had proved such during "the last 15–18 years" of operations. Morrow concluded "hopefully, we have addressed your concerns and you can now recommend our solid waste program for approval by the director." 111

In February 1987, Fields's attorney, Marshall Douthett, wrote to Hamlin at OEPA, requesting a ninety-day extension in resolving issues before Fields submitted his PTI application and final plans. Douthett argued that the Jackson County Health Department had approved SCS's actions at JCL and questioned why OEPA had not. Douthett threatened to meet with "the majority whip of the Ohio Senate" to discuss Fields's issues with OEPA. 12 Hamlin replied in March that "this Agency and the Health District has allowed Mr. Fields to operate a substandard landfill for at least the last decade in blatant violation of Ohio law and regulation," and when OEPA "did finally initiate enforcement action in 1983," Fields was uncooperative. When OEPA threatened litigation, Fields "finally negotiated with the Attorney General's Office," resulting in the 1985 settlement agreement. Hamlin wrote that Fields had violated that agreement and he would forward the matter to OEPA's "Litigation Screening Committee" for review. 13 In April, Hamlin completed an "Enforcement Referral" for JCL. He listed several violations of the 1985 agreement. First, Fields had submitted the hydrogeologic evaluation more than a month late, after Hamlin had denied his request for an extension. Fields then did not submit a PTI application by the March 1, 1987, deadline, after Hamlin had also denied an extension for that step. 114

Jackson County Landfill Closure and Aftermath, 1987-1999

On August 20, 1987, OEPA issued Director's Final Findings & Orders (DFFO) for JCL. The document described the November 1, 1985, settlement agreement, and listed Fields's violations of that agreement, including submitting the hydrogeologic report late, and failing to submit the PTI final plans and application. It also noted the violations discovered during an April 1987 OEPA inspection of JCL, which included exceeding approved landfill elevations, "failure to control and collect leachate," failure to compact and spread wastes at the edges of the landfill, failure to apply both daily and final covers, failure to seed finished landfill areas, and "failure to use approved cover material." OEPA ordered that Fields immediately cease operations, effective August 20, 1987. It also required him to submit "a detailed engineering report by an Ohio registered professional engineer outlining all deviations from the facility's currently approved detailed plans within 30 days." Fields also had to submit "a groundwater monitoring assessment plan" within sixty days. If that showed a need for remedial action, Fields would need to produce a remedial work plan and schedule, and

¹¹¹ Gordon Morrow, President, Jackson County Board of Health, to Jerry Roberts, District Representative, Division of Solid & Hazardous Waste Management, Southeast District Office, OEPA, July 18, 1986, SEDO-036319.

¹¹² Marshall Douthett, Attorney, to Stephan Hamlin, OEPA, February 27, 1987, GY0029196–197.

¹¹³ Stephan Hamlin, Unit Supervisor, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, to Marshall Douthett, Attorney, March 3, 1987, GY0029192–193.

¹¹⁴ OEPA Southeast District Office, "Enforcement Referral, Division of Solid and Hazardous Waste Management," April 15, 1987, GY0029182–187.

implement it directly. OEPA stated that Fields must immediately act to "minimize, control, or eliminate the conditions which contribute to the production of leachate." OEPA required him to submit a plan for a leachate collection system within sixty days of the DFFO. Finally, Fields must complete closure of JCL within sixty days of the DFFO. 115 On August 31, Nihiser and Hamlin inspected JCL, and found that it was still operating, in violation of the DFFO. Hamlin recommended that the matter be referred to the Ohio Attorney General (OAG) for legal action. 116

On September 18, 1987, Burgess & Niple produced a report in response to the portion of the DFFO requiring "a detailed engineering report by an Ohio registered professional engineer outlining all deviations from the facility's currently approved detailed plans."¹¹⁷ The report found that JCL had operated beyond approved boundaries "on the west side and on the northeast side of the landfill." 118 The contractor was unable to evaluate whether JCL complied with approved elevations due to lack of information in the documents they reviewed. 119 They found that JCL did not have surface water diversion ditches that met with requirements. 120 In October, Burgess & Niple produced a second report, responding to orders 3 and 6 in the DFFO, which required Fields to submit a groundwater monitoring assessment plan, and a plan for a leachate collection system. 121

In January 1988, Hamlin wrote to Noyes of Burgess & Niple. OEPA reviewed Noyes's plans and determined that they would not effectively determine JCL's impact on groundwater and also lacked sufficiently detailed leachate collection system plans. OEPA required Burgess & Niple to resubmit within thirty days. 122 Noves responded in February, arguing that the plans were "a realistic and practical response to the Orders," especially because there was a "lack of documentation and substantiation of an ongoing leachate problem at the Jackson Landfill." He noted that JCL had still been operational when OEPA issued the DFFO and that Burgess & Niple's plan, submitted in October 1987, suggested that "any observed leachate could be temporary and corrected with final cover and closure." Noves argued that the October 1987 plan had suggested "a phased approach," which would assess leachate conditions and add a collection system only if needed. He also argued that thirty days was not sufficient for producing a revised plan. 123

Also in February, Nihiser inspected JCL to check for compliance with the DFFO. He noted numerous issues at the site, including lack of vegetative cover and erosion in areas; leachate springs

¹¹⁵ Director's Final Findings and Orders, before the OEPA in the matter of Sanitary Commercial Services, Inc., August 20, 1987, GY0024718.

¹¹⁶ Inter-Office Communication from Steve Hamlin to Mike Savage, OEPA, re: Inspection Report of Sanitary Commercial Services, September 9, 1987, GY0029166; Richard Shank, Director, OEPA Southeast District Office, to Karen Wyant, Executive Director/Secretary, Jackson Area Chamber of Commerce, December 11, 1987, GY0029154-

¹¹⁷ Burgess & Niple, "Response to Orders of the Director of the Ohio Environmental Protection Agency, Jackson Landfill, Jackson, Ohio," September 1987, 1, GY0030232 at GY0030235.

¹¹⁸ Burgess & Niple, "Response to Orders," 4, GY0030232 at GY0030238.

¹¹⁹ Burgess & Niple, "Response to Orders," 5–7, GY0030232 at GY0030239–241.

¹²⁰ Burgess & Niple, "Response to Orders," 7, GY0030232 at GY0030241.

¹²¹ Burgess & Niple, "Response to Order No. 3 and No. 6 of the Director of the Ohio Environmental Protection Agency, Jackson Landfill, Jackson, Ohio," October 1987, GY0030280.

¹²² Stephan Hamlin, Unit Supervisor, Division of Solid & Hazardous Waste Management, OEPA Southeast District Office, to John Noves, Burgess & Niple, Limited, January 20, 1988, GY0029144–146.

¹²³ John A. Noyes, Burgess & Niple, Limited, to Steve Hamlin, District Engineer, OEPA, February 12, 1988, GY0029142-143.

and a leachate flow in the northeast corner; sparse seeding and vegetation in some areas; "several thousand gallons of rust colored water" in loading pits adjacent to "the cardboard building"; and a box blocking the roadway around which cars were driving. 124 Fields replied to the inspection report, explaining that lack of vegetative cover in one area was due to "continuous track machine activity." He noted that he would reseed sparsely vegetated areas, but that most of the landfill was seeded and vegetated. He acknowledged that "seasonal leachate does occur," but stated that it "will be permanently corrected as weather permits and closure is completed." At "the most recent working face of the landfill," Fields would perform "leachate monitoring and control." He disputed the presence of "several thousand gallons" of rust colored water near the cardboard building, writing that there were a few inches of muddy water and that the loading pit was not part of JCL. He noted that the road blockage was intentional, but that employees drove around it to do work on-site. 125

Noyes wrote to Hamlin on March 1, asking him to clarify "the issue of the documentation and substantiation of the leachate problems" at JCL. Noyes had been unable to locate the area with leachate problems, identified by OEPA as being in the southwest portion of the site. He suggested that the leachate may have been "either temporary or seasonal" and may have "been mitigated by the recent closure activity" at the site. ¹²⁶ Hamlin responded that OEPA had observed leachate "along the outerslopes of the landfill." He stated that Fields was aware of the "seeps" and had attempted in the past to cover them with soil. ¹²⁷

In April, Hamlin made an internal enforcement referral at OEPA, due to Fields's violation of the DFFO. Hamlin wrote to Mike Savage that Fields had "violated the Director's orders by submitting sham (unapprovable) plans for leachate control and monitoring and performing incomplete closure." He wrote, "Mr. Fields has shown extreme recalcitrance and is deserving of expedient enforcement action. We recommend that this case be given high priority for referral to the Attorney General's Office for prosecution to the full extent of the law." ¹²⁸

In November 1988, Nancy Moore, manager of OEPA's solid waste management section, wrote to Jackson County Health Commissioner Carl J. Grover, strongly urging JCBH to deny JCL a 1989 solid waste license, due to ongoing violations. ¹²⁹ In May 1989, Nihiser also wrote to Grover noting that JCL had not met requirements. He listed several specific deficiencies, including lack of appropriate cover material, lack of seeding and vegetative cover on adjacent borrow areas, lack of appropriate slope at the top of the landfill, and lack of posted signs noting the landfill's closure. He also noted that JCL had not filed a plat with OEPA, the county recorder, or JCBH depicting the site and including information about waste buried there. He wrote that OEPA had seen leachate

¹²⁴ Michael Nihiser, District Representative, Division of Solid and Hazardous Waste Management, "File Notes of 2/9/88 Inspection of the Jackson Landfill, Jackson County, February 18, 1988, GY0029138–141.

¹²⁵ J. Gregory Fields, President, Sanitary Commercial Services, to Steve Hamlin, District Engineer, OEPA, February 26, 1988, GY0029136–137.

¹²⁶ John A. Noyes, Burgess & Niple, Limited, to Stephen Hamlin, District Engineer, OEPA, March 1, 1988, GY0029507–508.

¹²⁷ Stephan L. Hamlin, OEPA, to John Noyes, Burgess & Niple, Ltd., March 8, 1988, GY0029504-505.

¹²⁸ Steve Hamlin to Mike Savage, Inter-Office Communication, April 6, 1988, GY0029495.

¹²⁹ Nancy L. Moore, Manager, Solid Waste Management Section, Division of Solid and Hazardous Waste, OEPA, to Carl J. Greever, Health Commissioner, JCBH, November 14, 1988, GY0029492.

entering a Salt Creek tributary from the site. He recommended that JCBH cite JCL and "take appropriate enforcement actions" to remedy violations. ¹³⁰

In January 1990, Nihiser wrote to Fields summarizing a December 1989 inspection of JCL and listing numerous violations of the OAC, Ohio Revised Code, and the DFFO. Nihiser wrote that a detailed engineering report submitted to OEPA to satisfy DFFO requirements did not show the entire site, and that groundwater monitoring assessment and leachate collection system plans submitted by Noyes in 1988 were "deficient." He also listed the same violations communicated to JCBH in May 1989. He asked Fields to respond to the letter within fifteen days explaining why JCL had committed violations, and providing plans to correct them. ¹³¹ Fields's attorney, Marshall Douthett, replied to Nihiser, objecting to the letter being sent to Fields, rather than to SCS, to which Fields had transferred title to JCL in January 1989, and noting that he had instructed Fields to "ignore the contents" of the letter. ¹³² He also stated that a pending Ohio Supreme Court appeal from the state of Ohio against an Environmental Board of Review order "should stay these proceedings during pending litigation." ¹³³

On May 19, 1990, Nihiser again wrote to Fields regarding an April inspection of JCL and outlined similar violations as in his January 1990 letter. He again requested a response within fifteen days. ¹³⁴ Again, Douthett replied, reiterating the contents of his January reply, and calling Nihiser's communication "extra-legal" and "totally improper." Nihiser replied requesting legal documents showing that Fields did not, and never had, owned JCL. ¹³⁶

Fields and his wife, Sally, filed a Certificate of Dissolution for Sanitary Commercial Services with the state in December 1988. ¹³⁷ Fields's 1998 deposition revealed that Mid-American Waste Systems, Inc., had purchased Sanitary Commercial Services. ¹³⁸ Also in 1988, the Fieldses formed a new, similarly named company, Sanitation Commercial Services, which assumed ownership of the JCL property. ¹³⁹ On August 27, 1990, Nihiser again wrote to Fields, regarding a July 23 inspection, listing violations and requesting a response within fifteen days. He also sent a copy of the letter to Michael Patrick, general manager of Sanitary Commercial Services. ¹⁴⁰ Gerald P. Jones of Mid-American

¹³⁰ Michael Nihiser, OEPA, to Carl J. Greever, Health Commissioner, JCBH, May 11, 1989, GY0029481-484.

¹³¹ Michael Nihiser, OEPA, to J. Gregory Fields, January 3, 1990, GY0029474–480.

¹³² Marshall B. Douthett, Attorney, to Michael Nihiser, OEPA, January 16, 1990, GY0029472–473; Complaint, in the United States District Court, Southern District of Ohio, Eastern Division, State of Ohio vs. Sanitation Commercial Services; Jon Gregory Fields; and Sally A. Fields, Case No. C2-97-984, September 4, 1997, 4, GY0030504 at GY0030512.

¹³³ Marshall B. Douthett, Attorney, to Michael Nihiser, OEPA, January 16, 1990, GY0029472-473.

¹³⁴ Michael Nihiser, OEPA, to J. Gregory Fields, May 10, 1990, GY0029464–468.

¹³⁵ Marshall B. Douthett, Attorney, to Michael Nihiser, OEPA, May 18, 1990, GY0029461.

¹³⁶ Michael Nihiser, OEPA, to Marshall B. Douthett, Attorney, May 30, 1990, GY0029460.

¹³⁷ Certificate of Dissolution by Shareholders of Sanitary Commercial Services, Inc., Charter No. 546734, December 29, 1988.

¹³⁸ G. Fields deposition, 156.

^{139 30(}b)(6) Deposition of Sally Fields, January 26, 2023, 10–11; Sanitation Commercial Services, Inc., Business Details & Filings, Ohio Secretary of State, accessed February 17, 2023, https://businesssearch.ohiosos.gov?=businessDetails/737082.

¹⁴⁰ Michael Nihiser, OEPA, to J. Gregory Fields, August 27, 1990, GY0029455–457; Michael Nihiser, OEPA, to Michael Patrick, General Manager, Sanitary Commercial Services, August 27, 1990, GY0029450.

Waste Systems, Inc., replied to Nihiser on September 10, noting that Sanitary Commercial Services did not own or operate JCL. ¹⁴¹ On November 7, Nihiser again sent letters to both Fields and Patrick, outlining violations at JCL found during an October 22 inspection. ¹⁴² Nihiser wrote a third letter to Fields on February 25, 1991, listing violations and noting that Fields had not replied to his August or November 1990 letters. ¹⁴³

On March 4, 1991, Steven Benson of SBA Consultants, Inc. (SBA), wrote to Hamlin at OEPA that, as a result of the Ohio Supreme Court case "State of Ohio vs Sanitary Commercial Services, Inc.," SBA had "been employed to proceed with the required engineering and proper closure of' JCL. After meeting with OEPA officials and obtaining information about past inspections, SBA moved forward with steps to complete closure of JCL. By mid-April, SBA had made plans to begin mapping the site, in preparation for creating the required plat. The contractor also planned to install a gate around the site, cap leachate areas, grade erosion areas, seed, and add mulch and straw to dikes to help with erosion control. 146

By May, SBA had reviewed the DFFO and assessed compliance with each of its seven orders. ¹⁴⁷ It submitted its proposed groundwater assessment plan the same month. ¹⁴⁸ Nihiser wrote to Benson on June 4, noting that OEPA's Division of Groundwater was reviewing the plan and would return comments. As to the remaining seven orders, he concluded that "violation of the Director's Orders will continue until each of these items are properly addressed." ¹⁴⁹ While SBA worked to meet the requirements of the DFFO, OEPA continued to perform regular site inspections and send violation notices to Fields, outlining outstanding items that were not in compliance with DFFO. ¹⁵⁰ Benson, in turn, continued to provide updates about progress at JCL in response to these violation notices.

In August 1991, OEPA's Division of Groundwater completed its review of SBA's groundwater assessment plans, deeming them insufficient and lacking in detail, particularly regarding leachate pathways. ¹⁵¹ Fields had taken measures to control leachate at JCL, which included "capping"

¹⁴¹ Gerald B. Jones, Manager Environmental Engineering, Mid-American Waste Systems, Inc., to Michael Nihiser, OEPA, September 10, 1990, GY0029449.

¹⁴² Michael Nihiser, OEPA, to J. Gregory Fields, November 7, 1990, GY0029440–443; Michael Nihiser, OEPA, to Michael Patrick, November 7, 1990, GY0029444.

¹⁴³ Michael Nihiser, OEPA, to J. Gregory Fields, February 26, 1991, GY0029436–439

¹⁴⁴ Steven Benson, SBA Consulting, Inc., to Steve Hamlin, OEPA, March 4, 1991, GY0029435.

¹⁴⁵ Steven Benson, SBA Consulting, Inc., to Mike Nihiser, OEPA, March 11, 1991, GY0029432; Steven Benson, SBA Consulting, Inc., to Mike Nihiser, OEPA, March 11, 1991, GY0029431; Steven Benson, SBA Consulting, Inc., to Mike Nihiser, OEPA, March 11, 1991, GY0029429–430; Mike Nihiser, OEPA, to Steven Benson, SBA Consulting, Inc., March 22, 1991, GY0029428.

¹⁴⁶ Steven Benson, SBA Consulting, Inc., to Mike Nihiser, OEPA, April 15, 1991, GY0029426–427.

¹⁴⁷ Steven Benson SBA Consulting, Inc., to Mike Nihiser, OEPA, May 3, 1991, GY0029420–422.

¹⁴⁸ SBA Consulting, Inc., "Proposed Groundwater Assessment, Jackson Sanitary Landfill, Jackson County, Ohio," May 1991, GY0029414–419.

¹⁴⁹ Michael Nihiser, OEPA, to Steven Benson, SBA Consultants, Inc., June 4, 1991, GY0029408–409.

¹⁵⁰ Michael Nihiser, OEPA, to J. Gregory Fields, June 4, 1991, GY0029403–407; Michael Nihiser, OEPA, to J. Gregory Fields, August 28, 1991, GY0029393–397; Michael Nihiser, OEPA, to J. Gregory Fields, December 10, 1991, GY0029361–GY0029365; Michael Nihiser, OEPA, to J. Gregory Fields, March 6, 1992, GY0029348–GY0029353; Michael Nihiser, OEPA, to J. Gregory Fields, May 12, 1992, GY0029338–GY0029343.

¹⁵¹ Douglas Snyder through Mike Preston, to Michael Nihiser through Steve Rine, OEPA Inter-Office Communication, August 30, 1991, GY0029388–392.

leachate seepage areas" through placement of around six thousand cubic yards of soil. Benson noted that "long range plans" for leachate control were still in progress "and will depend on the overall success of the present work and other variables which have yet to be determined." Other compliance measures involving seeding, erosion control, and slope measurements were ongoing at JCL. ¹⁵² In September, Benson wrote to Ken Welling with the City of Jackson, to request that JCL be allowed, temporarily, to bring landfill leachate to the city's sewage treatment plant for disposal, while SBA continued to work to find "a permanent solution to the problem of leachate" at JCL. ¹⁵³ Between October and December, efforts to survey and map the site progressed, culminating in submission of a draft JCL plat to OEPA in January 1992. ¹⁵⁴

In April 1992, SBA submitted a revised groundwater investigation plan for the former landfill site to OEPA. ¹⁵⁵ In an October 6, 1992, letter from Roberts to Fields, outlining a recent inspection of JCL and remaining violations, Roberts noted that the plan was still under review, but "budget cuts have severely curtailed our available resources for these revisions." However, he concluded that Fields's "compliance with the solid waste disposal law and rules" and the DFFO "is not contingent upon final review or approval of a ground water monitoring plan" and that Fields should take "immediate action" to comply with the DFFO. ¹⁵⁶ Benson responded to Roberts's letter on October 28, summarizing progress in the JCL closure, but noting that groundwater monitoring field drilling work had to occur before fulfilling several requirements, and that the City of Jackson's refusal to receive leachate had led SBA to rely on maintenance work to address leachate issues. ¹⁵⁷ On December 7, OEPA's Division of Drinking and Ground Waters finally provided comments on the plan internally to Roberts, criticizing it as "lacking in much of the detail necessary to assure the ground water [sii] monitoring program will meet the terms of the Order No. 3 [in the DFFO]." However, the division recommended approval of the plan, with listed conditions, to expedite JCL's closure. ¹⁵⁸

OEPA continued its practice of conducting regular inspections and sending violation notices to Fields for items still not addressed. ¹⁵⁹ Benson continued to reply to those notices with status

¹⁵² Steven Benson, SBA Consulting, Inc., to Michael Nihiser, OEPA, September 6, 1991, GY0029380-381.

¹⁵³ Steven Benson, SBA Consulting, Inc., to Ken Welling, City of Jackson, September 19, 1991, GY0029375.

¹⁵⁴ Steven Benson, SBA Consulting, Inc., to Michael Nihiser, OEPA, October 2, 1991, GY0029374; Michael Nihiser, OEPA, to Steven Benson, SBA Consulting, Inc., October 7, 1991, GY0029373; Steven Benson, SBA Consulting, Inc., to Michael Nihiser, OEPA, November 5, 1991, GY0029371; Steven Benson, SBA Consulting, Inc., to Michael Nihiser, OEPA, December 30, 1991, GY0029357–358; Steven Benson, SBA Consulting, Inc., to Michael Nihiser, OEPA, January 28, 1992, GY0029354.

¹⁵⁵ S.B.A. Consultants, Inc., "Proposed Hydrogeological Investigation and Evaluation of the Jackson Landfill, Jackson, Ohio," April 23, 1992, GY0029302–GY0029317.

¹⁵⁶ Jerry K. Roberts, OEPA, to J. Gregory Fields, October 6, 1992, GY0029761–765.

¹⁵⁷ Steven Benson, SBA Consulting, Inc. to Jerry K. Roberts, OEPA, October 28, 1992, GY0029753–754.

¹⁵⁸ Douglas Snyder through Mike Preston to Jerry Roberts through Steve Rine, OEPA Inter-Office Communication, October 6, 1992, GY0029750–752.

¹⁵⁹ Jerry K. Roberts, OEPA, to J. Gregory Fields, July 8, 1993, GY0029746–749; Jerry K. Roberts, OEPA, to J. Gregory Fields, March 23, 1994, GY0029736–740; Scott Kester, OEPA, to J. Gregory Fields, June 29, 1994, GY0029731–734; Scott Kester, OEPA, to J. Gregory Fields, August 24, 1994, GY0029726–729; Scott Kester, OEPA, to J. Gregory Fields, December 20, 1994, GY0029720–725; Scott Kester, OEPA, to J. Gregory Fields, January 31, 1995, GY0029708–714; Jerry K. Roberts, OEPA, to J. Gregory Fields, March 7, 1995, GY0029696–703; Daniel L. Bergert, OEPA, to J. Gregory Fields, July 19, 1995, GY0029677–683; Daniel L. Bergert, OEPA, to J. Gregory Fields, November 17, 1995, GY0029665–670; Daniel L. Bergert, OEPA, to J. Gregory Fields, January 29, 1996, GY0029658–664; Daniel L. Bergert, OEPA, to J. Gregory Fields, March 16, 1996, GY0029651–657; Daniel L. Bergert, OEPA, to J. Gregory

updates. On July 26, 1993, Benson wrote to Roberts, repeating several points from earlier replies. He reiterated that SBA would assess final cover at the site during "the drilling program," and that Fields was performing maintenance activities in the meantime. Seeding and mulching continued regularly. SBA would also address slope issues during the drilling program. The City of Jackson still declined to receive leachate, leaving maintenance work as the best avenue to address the leachate issue. SBA had still not received approval for the groundwater monitoring plan. ¹⁶⁰

On February 7, 1994, OEPA communicated its December 1993 assessment of the groundwater plan to Fields, outlining its conditional approval. On July 16, Benson replied to Scott Kester at OEPA regarding a June 29 list of violations he had sent to Fields. Benson explained delays in closure of JCL writing, "due to the years that have passed during OEPA's review and approval of the Assessment/monitoring work plan and the lack of critical answers from OEPA it is taking some time to organize the field work." 162

On January 31, 1995, Daniel J. Harris of OEPA's Compliance Monitoring Enforcement Unit in the Division of Solid and Infectious Waste Management wrote to Fields regarding JCL. Harris wrote that OEPA had "serious concerns" about compliance with the DFFO. He noted that OEPA was considering "options for escalated enforcement ... including administrative and judicial actions and the payment of civil penalty." He advised Fields to contact OEPA's legal office within ten days to delineate his plans "to close and begin post-closure care" at JCL. 163 Douthett replied on February 10, that he would "review everything that has transpired concerning" the JCL site between 1987 and 1995, and would reply further "within a reasonable time frame from the date of this letter." ¹⁶⁴ On March 28, Douthett wrote to John Mack in OEPA's Legal Section, explaining that Fields had recently talked with Vaughn Laughlin in "the EPA Central Office." Laughlin had suggested that OEPA meet with Fields "to review the historic chronology of activity conducted on the site" since 1987. To that end, Douthett and Fields had begun to create a chronology. Douthett included an incomplete list of events between March 4, 1991, and November 26, 1992, and suggested that the log should be completed before a meeting occur. 165 Mack replied to Douthett on April 5, objecting to Douthett's and Fields's failure to comment on steps Fields intended to take to finalize JCL's closure. He noted the many violation notices sent to Fields and argued that "to date, major work to properly close the facility has not been performed." He concluded that, considering "the minimal response" to the violations, OEPA would continue to consider "escalated enforcement." ¹⁶⁶ In an April 26 reply, Douthett pushed back, arguing that "considerable activities and funds have been expended over the past several years to attempt to comply with the closure of this landfill with little

Fields, July 24, 1996, GY0029637–643; Daniel L. Bergert, OEPA, to J. Gregory Fields, October 16, 1996, GY0029606–611; Daniel L. Bergert, OEPA, to J. Gregory Fields, December 17, 1996, GY0029593–598; Daniel L. Bergert, OEPA, to J. Gregory Fields, March 21, 1997, GY0029541–546; Joseph P. Konecelik, Assistant Attorney General, to Marshall B. Douthett, Attorney, June 26, 1997, GY0029526–531.

¹⁶⁰ Steve Benson, SBA Consulting, Inc., to Jerry K. Roberts, OEPA, July 26, 1993, GY0029509 at GY0029744–745.

¹⁶¹ Jerry K. Roberts, OEPA, to J. Gregory Fields, February 7, 1994, GY0029741–743.

¹⁶² Steven Benson, SBA Associates, Inc., to Scott Kester, OEPA, July 16, 1994, GY0029730.

¹⁶³ Daniel J. Harris, OEPA, to J. Gregory Fields, January 31, 1995, GY0029715.

¹⁶⁴ Marshall B. Douthett, Attorney, to Daniel J. Harris, OEPA, February 10, 1995, GY0029705–706.

¹⁶⁵ Marshall B. Douthett, Attorney, to John Mack, OEPA, March 28, 1995, GY0029691–692.

¹⁶⁶ John Mack, OEPA, to Marshall B. Douthett, Attorney, April 5, 1995, GY0029689-690.

or no direction from the Ohio EPA." He again requested a meeting to review activities completed and find a path forward. 167

On June 23, 1995, OEPA Director Donald Schregardus forwarded the JCL matter to Betty Montgomery, Attorney General of Ohio (OAG) in the Environmental Enforcement Section, for civil proceedings. 168 Mack informed Douthett of the OAG's involvement on July 22. 169 On November 14, Assistant Attorney General Joseph P. Konecelik wrote to Douthett, urging SCS to enter into a consent order with the state to establish a compliance schedule and avoid a lawsuit.¹⁷⁰ On June 4, 1996, Douthett and Fields met with OAG and OEPA officials to discuss settlement. The state's terms included "explosive gas monitoring, leachate control/collection, ground water [sit] monitoring/assessment, financial assurance for 30 years, and construction of a 1976-style cap on the landfill." The state required a response within sixty days, stating whether Fields and Douthett agreed and providing deadlines to submit plans. 171 By May 1997, OAG and Fields and his attorney had traded consent order drafts back and forth, but had not reached an agreement. Konecelik proposed to Donald Cox, Douthett's law partner, that the parties have a final meeting in June to "either reach an agreement on all issues, or we will declare an impasse." Following that meeting, on July 8, Konecelik forwarded Cox a consent order outlining "certain minimum work to be performed at the Site," including "testing the current cap on the landfill, installing a leachate collection system, repairing the landfill cover temporarily, and hiring a qualified hydro-geologist to develop a ground water monitoring plan." Konecelik warned that this was the state's "bottom line"—while negotiations regarding a final cap and gas and groundwater monitoring could continue, the aforementioned items needed to happen immediately. Konecelik subsequently agreed to an August 1, 1997, deadline for Fields to respond to the proposed order. 173

In September 1997, the State of Ohio filed a complaint against Sanitation Commercial Services, Fields, and his wife Sally Fields in U.S. District Court for the Southern District of Ohio, Eastern Division. The civil complaint sought to recover costs from the Fieldses under Section 107 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), for costs incurred by the State of Ohio in responding to releases or threatened releases of hazardous substances at JCL. The complaint also sought "injunctive relief, damages, cost recovery, civil penalties and declaratory relief" related to JCL's violation of Ohio solid waste laws. The State alleged that Fields knowingly violated laws, by allowing solvents and other materials, including acetone, classified as "hazardous substances" to be disposed of at JCL. Those substances then

¹⁶⁷ Marshall B. Douthett, Attorney, to John Mack, OEPA, April 26, 1995, GY0029688.

¹⁶⁸ Donald R. Schregardus, Director, OEPA, to the Honorable Betty Montgomery, Attorney General of Ohio, Environmental Enforcement Section, June 23, 1995, GY0029684.

¹⁶⁹ John Mack, OEPA, to Marshall B. Douthett, Attorney, July 22, 1995, GY0029675.

¹⁷⁰ Joseph P. Konecelik, Assistant Attorney General, to Marshall B. Douthett, Attorney, November 14, 1995, GY0029671.

¹⁷¹ Joseph P. Konecelik, Assistant Attorney General, to Marshall B. Douthett, Attorney, April 18, 1996, GY0029649.

¹⁷² Joseph P. Konecelik, Assistant Attorney General, to Donald A. Cox, May 22, 1997, GY0029534.

¹⁷³ Joseph P. Konecelik, Assistant Attorney General, to Donald A. Cox, July 8, 1997, GY0029515; Joseph P. Konecelik, Assistant Attorney General, to Donald A. Cox, July 18, 1997, GY0029512.

¹⁷⁴ Complaint, September 4, 1997, 1, GY0030504 at GY0030509.

¹⁷⁵ Complaint, September 4, 1997, 2, GY0030504 at GY0030510.

migrated, or threatened to migrate, into surface and groundwater. The complaint explained that the State had ordered Fields to close JCL under the 1987 DFFO, and that Fields had failed to meet DFFO requirements, in line with the 1976 version of the OAC, between that order and February 1990. ¹⁷⁶ In both March 1990 and June 1994, the State of Ohio altered facility closure requirements in the OAC. The State argued that JCL's closure became subject to the new requirements as they passed, because closure had not been completed. 177 Generally, Fields had failed to meet the timelines for closure delineated in each version of the OAC. Specifically, Fields had failed to perform explosive gas monitoring, plans for which were due to OEPA by February 1, 1989; had not submitted plans for and enacted a groundwater monitoring program; and had not met "financial assurance requirements" to ensure funding for landfill closure and remediation. The complaint also alleged that Fields had not met "the operational criteria for a sanitary landfill facility" by failing to control runoff and prevent erosion of the landfill cap and failing to appropriately collect and treat leachate. The State also cited Fields for "water pollution," because he had allowed "solvents and other materials" to be placed where they could discharge to Salt Lick Creek and other waterways. 178 The complaint alleged Fields was responsible for OEPA costs in its response to the issues at JCL, and for "injunctive relief" for creating "a statutory nuisance" and a "common law public nuisance." The state asked the court to impose those financial costs and penalties, and to compel Fields to comply with landfill closure requirements. 179

Fields's June 10, 1998, deposition, cited throughout this report, was taken under oath in Columbus, Ohio, as part of the ongoing legal proceedings by Assistant Attorney General Koncelik. 180 OEPA and Fields entered a consent decree on February 16, 1999, resolving the legal matter. That decree "absolved Mr. Fields, his wife, and his company, Sanitary [sii] Commercial Services, Inc., of all past and existing violations, as well as any further responsibility for closure of the landfill or compliance with Ohio's solid waste and water pollution regulations for the landfill." In exchange, Fields "made a one-time cash out payment of \$225,000 into a trust fund established for the closure and maintenance of Jackson County Landfill." The decree did not protect Fields against violations "not alleged in the Complaint" or "first occurring after the entry date" of the consent decree and also did not prevent the State from using legal means to enforce the decree. 181 It also enjoined Fields from receiving wastes at JCL and gave OEPA unconditional access to the site for investigations and remediation work. The decree required Fields to provide OEPA with documents and information about site conditions and preserve documents about the site for ten years, giving

¹⁷⁶ Complaint, September 4, 1997, 5–7 and 11, GY0030504 at GY0030513–515 and 519.

¹⁷⁷ Complaint, September 4, 1997, 7–8, GY0030504 at GY0030515–516.

¹⁷⁸ Complaint, September 4, 1997, 12–18, GY0030504 at GY0030520–526.

¹⁷⁹ Complaint, September 4, 1997, 18–22, GY0030504 at GY0030526–530.

¹⁸⁰ G. Fields Deposition, 1–6. Note that the deposition transcript cited throughout was volume II of the Greg Fields deposition. Volume I apparently contained private financial information and was likely destroyed at the end of the litigation, due to a court protective order. See S. Fields 30(b)(6) deposition, 29–31, 35–36.

¹⁸¹ Quotation in Dan Bergert through Steve Rine through Dave Cehenault to Brian Blair through Ken Dewey, May 2, 2002, GY0029803; Dan Bergert, OEPA, to File, July 6, 1999, GY0029832-833; Consent Decree, in the United States District Court, Southern District of Ohio, Eastern Division, State of Ohio v. Sanitation Commercial Services, Inc., et. al., Case No. C2-97-984, February 16, 1999, GY0030634.

OEPA sixty days' notice before destruction. The Fieldses were not allowed to sell or allow easements over JCL without OEPA approval. 182

¹⁸² Consent Decree, September 16, 1999, 4–7, GY0030634 at GY00306638–641.

R. J. Reynolds Foods

Company History

In 1947, Jeno F. Paulucci founded Chun King in Duluth, Minnesota. ¹⁸³ The company grew, packaged, and marketed canned and frozen Asian-American foods. According to Paulucci, he recognized the potential of the Asian-American food market after noticing that U.S. service members returning from World War II "had developed a taste for Oriental cuisine." ¹⁸⁴ Originally a beansprout growing business financed through a \$2,500 loan, Chun King grew be the largest producer of frozen Asian-American food in the United States. ¹⁸⁵

In 1966, Paulucci sold Chun King and its Jackson processing plant to R. J. Reynolds Tobacco Company for \$63 million. ¹⁸⁶ The company operated its food businesses as R. J. Reynolds Foods, which later became RJR Foods. The company entered an agreement of merger with Chun King in 1967. ¹⁸⁷

¹⁸³ Agreement of Merger, May 28, 1967, REY000063 at REY000065, [1]; "Take Some Home, Boys!," *Cincinnati Enquirer*, April 12, 1967, 16.

¹⁸⁴ "Take Some Home, Boys!," 16.

^{185 &}quot;Chun King President to Crown Apple Queen," Logan (OH) Daily News, July 26, 1963, 2.

¹⁸⁶ "Take Some Home, Boys!," 16. In 1969, R. J. Reynolds officially changed the business name to R. J. Reynolds Industries, Inc. See "R. J. Reynolds to Change Name," *Akron Beacon Journal*, April 11, 1969, 23; Application for Certificate of Authority, Foreign Corporation, August 22, 1966, [1], REY000001 at REY000001.

¹⁸⁷ Application for Amended Certificate of Authority of R. J. Reynolds Foods, Inc., July 20, 1970, 1, REY000001 at REY000029; Agreement of Merger, May 28, 1967, [3], REY000063 at REY000065; Certified Copy of Certificate of Agreement of Merger, March 28, 1969, [1], REY000063 at REY000063.

¹⁸⁸ "Jackson: 1980 a Mixed Year for Industries," *Chillicothe (OH) Gazette*, February 28, 1981, 51; "Del Monte execs warming up to marketing frozen foods," *Dayton (OH) Daily News*, December 3, 1981, 12.

¹⁸⁹ "Jackson: 1980 a Mixed Year for Industries," 51.

¹⁹⁰ Certificate of Amendment of Certificate of Incorporation of RJR Foods, Inc., November 20, 1981, [42], REY000001 at REY000042.

¹⁹¹ Defendant R. J. Reynolds Tobacco Holdings, Inc.'s Second Supplemental Responses to Plaintiff The Goodyear Tire & Rubber Company's First Set of Interrogatories and Request for Production of Documents, Interrogatory No. 1, Second Supplemental Response, 3, July 27, 2022; "Jackson County: CIC Awaits Loan for Jeno's," *Chillicothe (OH) Gazette*, June 17, 1982.

Jackson-Area Operations

In 1956, Chun King, also known as Chun King Sales, Inc., acquired the nearly 94,000 square-foot Furnace Foundry building located at 100 East Broadway in Jackson, Ohio. Chun King retrofitted the building to store and produce a variety of canned and frozen food products. The facility entered production in 1957 and eventually employed as many as 500 people. The plant produced a variety of canned and frozen products under the Chun King label, but also experimented with other food products. In 1960, for example, when a shortage of celery slowed production of some of its Chun King products, it began producing Wilderness brand cherry pie filling. The

By 1979, RJR Foods's Jackson plant continued to produce Chun King products, including some 800,000 egg rolls every day by 1979. As of February 1981, the RJR Foods plant in Jackson employed 215 people. After corporate restructuring brought Chun King under Del Monte, the plant announced that it would close on July 31, 1981. At that time, 210 employees would lose their jobs. 197

Waste Streams to Jackson County Landfill

While the Chun King plant brought new jobs to the region, it also stressed local utility services. Less than a year after entering production, in 1958, the *Chillicothe Gazette* reported on sewage disposal problems arising from the plant. Sewer lines became "overflowed by the volume and type of Chun King sewage." The City health department proposed that uncontaminated water from the plant be diverted into Salt Creek, while control measures be applied to filter vegetable rinse water and to trap grease generated as a byproduct from "processing meat and fowl." 198

The plant's waste disposal problems continued and in 1959, the Jackson City Council instructed the City administration to warn Chun King against "prohibited dumping of grease and other heavy material into city sewers." Chun King also consumed considerable amounts of city water. City officials addressed an increase in water consumption when the plant was in operation, noting that the volume was expected to increase further with a proposed expansion of the plant. ²⁰⁰

In 1962, the City of Jackson's new sanitary landfill began operating and offered a solution for the Chun King plant waste. Among the landfill's listed rates for dumping waste included "Food

¹⁹² "Chun King, Oriental Food Processors, Buys Building and Site in Jackson," *Chillicothe (OH) Gazette*, May 24, 1956, 25; "Jacksonians Solicited for Industry," *Chillicothe (OH) Gazette*, June 17, 1957, 16.

^{193 &}quot;Jacksonians Solicited for Industry," 16; "Chamber manager retires," Chillicothe (OH) Gazette, January 21, 1982, 8.

¹⁹⁴ "Chun King Turns to Cherry Pies," *Chillicothe (OH) Gazette*, July 14, 1960, 4; "Chun King President to Crown Apple Queen," 2.

¹⁹⁵ "Jackson Industries Diverse, Growing: Chun King," Chillicothe (OH) Gazette, February 23, 1979.

^{196 &}quot;Jackson: 1980 a Mixed Year for Industries," 51.

¹⁹⁷ "Second Jackson Plant to Close," *Chillicothe (OH) Gazette*, June 20, 1981, 1. Exact date operations ceased is unclear. See Defendant R. J. Reynolds Tobacco Holdings, Inc.'s Second Supplemental Responses to Plaintiff The Goodyear Tire & Rubber Company's First Set of Interrogatories and Request for Production of Documents, Interrogatory No. 1, Second Supplemental Response, 3, July 27, 2022.

^{198 &}quot;Jackson Council Calls for Sewage Cleanup," Chillicothe (OH) Gazette, May 16, 1958, 12.

^{199 &}quot;Jackson Council Airs Utility Problems," Chillicothe (OH) Gazette, August 27, 1959, 4.

²⁰⁰ "Purchase of Landfill Site at Jackson Faced by Suit," Chillicothe (OH) Gazette, August 25, 1960.

processing plants" at a rate of \$50 per year. It is unclear if the annual rate came in addition to the estimated per ton rate applied at the facility. 201

After the City of Jackson's sanitary landfill had failed and closed in the late 1960s, the RJR food processing plant used JSL for waste disposal. According to Paul Stull, P.E., the landfill, which opened in 1969, accepted waste from the plant on an estimated basis, rather than weighing each load. As of 1970, it was accepting an estimated twelve tons per day from the plant, which it hauled to the landfill daily in "two-three trips with a dump truck." ²⁰²

RJR's problems with disposal of wastes in the city sewers persisted in the 1970s. John Evans, a Jackson City Council member from 1972–1977 and council president from 1977–1978, recalled frequent issues related to RJR discharging wastewater to the city sewer system. RJR regularly received fines for violating discharge permits, due to high levels of oil, fats, and grease in its wastes. Evans stated that RJR "discharged more wastewater to the city sewer than any other facility or customer on the city's system," consuming around half of the city's daily fresh water supply during industrial operations. Ronald Speakman, Director of Safety for Jackson from 1982–2002, similarly remembered RJR "as being a major industry connected to the wastewater treatment plant in the 1980s," and repeatedly violating wastewater permits because of "excess quantities of fat, oil, and grease" in its wastes.

In 1974, industrial waste made up approximately fifty percent of all waste accepted by JCL. ²⁰⁵ It is unclear how much of that industrial waste was derived from the RJR plant, but by 1978, as evidenced by a letter sent to RJR by the OEPA, it appeared that JCL was not equipped to handle the industrial waste that had been disposed of there. Jerry Roberts of the OEPA notified Plant Manager Albert Schuchardt that RJR might be in violation of the Resource Conservation and Recovery Act of 1976, known as P.L. 94-580. He explained that the landfill was not approved to handle certain industrial waste and "the Ohio EPA respectfully recommends that an alternative method of treatment and/or disposal of your industrial wastes be considered." ²⁰⁶ Charles Terry, Sanitarian Administrator for the JCBH, questioned why OEPA believed the waste generated at the RJR plant would be in violation of P.L. 94-580. ²⁰⁷

In 1983, Jeno's reopened the shuttered RJR food processing facility. ²⁰⁸ John Carlson, vice president of engineering for Jeno's, reviewed RJR records from the time it operated the plant and found that RJR had discharged an average daily flow of 310,000 gallons per day of wastewater, with

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²⁰¹ "Sanitary Landfill Starts Next Week: Present City Dump Will Be Closed as New Landfill Site Is Ready for Operations," *Jackson Sun-Journal*, August 30, 1962, [177–78], GY0028732 at GY0028909–910. See section on the Jackson County Landfill in this report for a discussion of the City of Jackson's sanitary landfill.

²⁰² Paul Stull, P.E., to George A. Carroll, District Sanitary Engineer, Southeast District Office, Ohio Department of Health, January 21, 1970, [146–47], GY0028732 at GY0028877–878; Paul Stull, Report on the Structure and Operational Procedure for Jenkins Sanitary Landfill, Jackson, Ohio," February 24, 1970, 3, GY0028869 at GY0028872.

²⁰³ Declaration of John Evans, January 18, 2023, 1–2, GY0092114–2115.

²⁰⁴ Declaration of Ronald Speakman, January 24, 2023, 1–2, GY0092118–2119.

²⁰⁵ Jerry Roberts, Solid Waste Disposal Questionnaire, May 16, 1974, [123–28], GY0028732 at GY0028854–859.

²⁰⁶ Jerry K. Roberts, Sanitarian, Office of Land Pollution Control, Southeast District, OEPA, to Albert Schuchardt, Plant Manager, R.J.R. Foods Incorporated, May 17, 1978.

²⁰⁷ Charles F. Terry, Sanitarian Administrator, Jackson County Board of Health, to Donald E. Day, Chief, Office of Land Pollution Control, Ohio E.P.A., May 22, 1978, 2.

²⁰⁸ "Jeno's to Open Plant Friday," Chillicothe (OH) Gazette, January 6, 1983, 8.

a maximum daily flow of 1,140,000 gallons per day. The discharge included 1,630 pounds of BOD (Biochemical Oxygen Demand), 625 pounds of SS (Suspended Solids), and 70 pounds of nitrogen per day.²⁰⁹

RJR was also a major user of JSL/JCL, but exact, chemical composition of the waste that RJR deposited there from 1969–1982 is not evidenced by reviewed historical records.²¹⁰ According to Fields's 1998 deposition testimony, the Chun King/RJR plant was "a primary account from day one," and further, the company's waste was "the first or second load that ever hit the ground at that site." He believed that the company not only dumped food byproduct at the facility, but also pesticides "used to keep down flies and stuff on their docks." ²¹²

Although the RJR plant certainly dumped solid waste, Fields also recalled receiving liquid waste from it in late 1970. Fields explained,

they did have a tanker truck that. . . . was a catch basin, as I understood it, and it went directly to the city sewers, but it caught solids and they would pump those semi-solids off and they would haul those to the landfill, and, again, it was a minimal amount, but I remember seeing the truck. ²¹³

John Evans also recalled such a truck, noting that while servicing RJR vending machines sometime before 1982, as part of his local vending machine business, he "observed a large tanker truck connected to an approximately 20,000 gallon stationary tank" which "was being loaded with oil and grease for disposal elsewhere."²¹⁴

Fields recalled the appearance of some of RJR's waste. "I wouldn't call it oil," he clarified, "it was slop, but it had high oil content. The cooking oil and stuff it would float, it was what would float or sink." He explained that RJR dumped the slop on the garbage where it was "contained and soaked up with cover material." When asked about a reported 27,000 gallons per year of "oily waste" deposited in the landfill he concluded, "I've given you the description of the only liquid that could have been in that category that I can think of would have been what would have come out of R. J. Reynolds and if there was some other volume I do not recall what it is." Ell Sherritt, who worked as a truck driver at JCL during the 1980s, remembered hauling "sludge wastes containing

²⁰⁹ John Carlson, Vice President, Engineering, Jeno's Inc., to Ohio EPA, Attn: Ken Dewey, March 4, 1983, GY0025117 at GY0025297.

²¹⁰ G. Fields deposition, 58.

²¹¹ G. Fields deposition, 58; See also "Notes from 10/01/98 Interview," 1, GY0001055. As discussed above, Paul Stull's February 1970 report noted that "The Reynolds Food Company waste is estimated to average twelve tons a day, hauled in by two-three trips with a dump truck." Paul Stull, Report on the Structure and Operational Procedure for Jenkins Sanitary Landfill, Jackson, Ohio," February 24, 1970, 3, GY0028869 at GY0028872.

²¹² G. Fields deposition, 40.

²¹³ G. Fields deposition, 40.

²¹⁴ Declaration of John Evans, January 18, 2023, 2, GY0092114 at GY0092115.

²¹⁵ G. Fields deposition, 49.

²¹⁶ G. Fields deposition, 50.

²¹⁷ G. Fields deposition, 117.

fats, oils, and grease" from the Jackson plant to JCL approximately one or twice weekly, in addition to hauling "paper and cardboard waste \dots approximately every other day." 218

²¹⁸ Declaration of Bill Sherritt, January 1, 2023, 1–2, GY0092116–2117.

Attachment A: Resume



Keith Zahniser, PhD

Senior Historian

Keith Zahniser joined HRA in July 2007 after spending five years teaching U.S. history at the university level. He holds a PhD in U.S. history from the University of California, Santa Barbara. As a consultant, he has developed an expertise in establishing the historical processes, production, and waste streams of operations at hazardous waste sites, tracing corporate genealogies, and documenting government-private production relationships during wartime. He has researched and written on the historical contributions to contamination at complex multi-party Superfund sediment sites and the land use and history of manufacturing and military entities. He has also researched and written on the administrative history of the U.S. Army Corps of Engineers and on the historical management and use of natural resources on Indian reservations, tribal bed and banks ownership, and the legislative history of dams and their effects on reservations.

Environmental Litigation

Contaminated Military Site in the Midwest, 2022 to present [Confidential]

Senior Historian and Consultant for research on a contaminated former military base. Conducted research in the National Archives and online to determine the source of TCE contamination from the World War II era.

Contaminated Site in Southern California, 2015 to present [Confidential]

Senior Historian and Project Manager for research on a contaminated southern California site. Wrote an expert historical report and expert rebuttal report. Will be deposed and will testify at trial in 2023. HRA also researched, reviewed, and summarized historical sources of environmental contamination, compiled collected historical documents into a useful database, conducted original research at California repositories, and consulted on historical issues for ongoing litigation.

Contaminated Site in the Midwest, 2021-2022 [Confidential]

HRA conducted online research to determine the source and nature of contamination at a site in the Midwest. This included historical newspaper and company history research to determine the site use and operational history of a railyard and industries surrounding the contaminated site.

Contaminated Site in the Midwest, 2020-2021 [Confidential]

HRA conducted targeted historical research on the alleged deposition of PFAS in a Midwestern city. HRA researched online for historical information on possible sites of deposition and on PFAS use among local industries.

Contaminated Site in the Midwest, 2020 [Confidential]

Senior Historian and Project Manager for research on a site in the Midwest with ongoing nuclear contamination from storage of nuclear residues during World War II.

Historical Railroad Operations, Northeastern U.S., 2018-2020 [Confidential]

Senior Historian and Project Manager for investigation developing a historical record of ownership and activities at several railroad yards, stations, and shops in the Northeastern United States. HRA conducted research at local repositories, state archives, the National Archives, and in online databases. Document collection and analysis focused particularly on tracing the development of, and changes in electric locomotive equipment resulting in polychlorinated biphenyl (PCB) contamination.



Education

PhD, History, 1997, University of California, Santa Barbara

MTS (Master of Theological Studies), Religion and Culture, 1990, Harvard Divinity School

BA, History and French, 1987, Ohio State University (Summa cum laude with honors in liberal arts and distinction in history)

Qualifications

Meets the Secretary of the Interior's Professional Qualification Standards in History

Professional Affiliations

Society for History in the Federal Government (SHFG)

National Council on Public History

American Bar Association (Associate Member), Section of Environment, Energy, and Resources Corporate history, 2019 [Confidential]

Project Manager for company history research. HRA conducted research into the history and product development of a company producing home products containing per- and polyfluoroalkyl substances (PFAS). HRA researched at the Library of Congress and in corporate records at a state historical society.

Contaminated New Jersey Former Manufacturing Site, 2017-2019 [Confidential] Senior Historian and Project Manager for investigation into source of contamination at a former New Jersey manufacturing site. HRA researched at the National Archives, the Library of Congress, and in online sources for the products, processes, and chemicals used in World War II and post-war production of materiel resulting in PCB contamination.

Contaminated Michigan Manufacturing Site, 2017-2019 [Confidential] Senior Historian and Project Manager for research into contamination of a former manufactured gas plant site in Michigan.

Contaminated Army Base in Washington, D.C., 2016 [Confidential] Senior Historian and Project Manager for research on the historical sources of environmental contamination on the campus of a former Army Medical Center in Washington, D.C.

Contaminated New York Waterway, 2014-2016 [Confidential]

Senior Historian, Project Manager, and Co-author of reports on potentially responsible parties along a contaminated waterway in New York that is now a Superfund site. HRA historians completed research in a wide range of archival repositories in New York City and Albany, as well as at the National Archives in Washington, D.C., to obtain primary historical information relating to entities that operated facilities along a contaminated New York waterway. In addition to completing intensive research, the team prepared detailed reports summarizing the findings.

Contaminated New Jersey Waterway, 2011, 2016 [Confidential] Senior historian, Project Manager, and Principal Investigator for research on a contaminated New Jersey waterway. HRA historians researched the production volumes and processes of an industry situated on the banks of a major New Jersey industrial waterway. HRA's historians conducted extensive research in the National Archives in Washington, D.C., and College Park, Maryland, the Library of Congress, the New Jersey State Archives, the New Jersey Historical Society, business and chemical libraries, and other local document repositories.

Contaminated site in North Carolina, 2015 [Confidential]

Senior Historian, Project Manager, and Principal Investigator for research on a contaminated site in North Carolina. HRA historians traced the corporate histories of parties that had occupied a contaminated manufacturing facility in North Carolina and helped to determine the production volumes and processes of historic operations on the site.

Manufactured Gas Plant in Tennessee, 2015 [Confidential] Senior Historian, Project Manager, and Principal Investigator for research on a manufactured gas plant in Tennessee. HRA historians conducted historical research to establish the history and operations of a manufactured gas plant in Tennessee and its potential contribution to contamination of a nearby waterway.

Contaminated Manufacturing Plant Site, 2012-2013 [Confidential] Senior Historian and Principal Investigator for research on a contaminated manufacturing plant site. HRA historians researched the production history and associated government contracts for an aircraft manufacturing plant in southern California that held numerous government contracts for production of many types of aircraft for the War Department. HRA concentrated its research in the extensive military records held by the National Archives and Records Administration, College Park, Maryland, investigating production volumes and processes, materials used and waste streams generated, and the extent of government control of the plant in wartime.

Formerly Used Defense Site Potentially Responsible Party Search, 2011-2013 [Confidential] Senior Historian, Project Manager, and Principal Investigator for research on a formerly used defense site. HRA historians prepared a site ownership and operational history of an Indiana steel mill involved in the U.S. nuclear program in the 1940s, conducting research in the National Archives facilities in Washington, D.C., College Park, Maryland, and Atlanta, Georgia, and in local and state records in Indiana. HRA also conducted oral histories and produced an extensive written report summarizing research findings.

Contaminated East Coast Waterway, 2012 [Confidential] Senior Historian, Project Manager, and Principal Investigator for research on a contaminated East Coast waterway. HRA investigated corporate successors for a nineteenth century chemical plant's pollution in the New York City area.

Contaminated Manufacturing Plant Site, 2011-2012 [Confidential] Project Manager and Principal Investigator for research on a contaminated manufacturing plant site. HRA historians researched the site ownership and production history of a factory owned by a major pharmaceutical company on a New Jersey property. Research was conducted in the National Archives and at the Library of Congress.

Native American Litigation

Native American Litigation [Confidential] Senior Historian in suits brought by tribes and individual Indians against the United States involving the history of reservation boundaries, rights to the bed and banks of reservation rivers, compensation for land takings, and the management of natural resources on Indian reservations in Oklahoma and North Dakota.

Administrative Histories

History of the Indiana Central Canal and Holcomb Gardens The USACE Office of History awarded HRA this project to write narrative histories of the Indianapolis Central Canal and the Holcomb Gardens, and to design and print 100 bound copies of each manuscript and 500 copies of a tri-fold pamphlet illustrating the most important information about the Indianapolis Central Canal. HRA partnered with cultural research management firm Gray & Pape to research and write the two manuscripts, which detailed the information necessary for a National Register multiparty nomination describing the architectural, cultural, and historical significance of these sites, with a more developed historical context based on additional historical research. HRA partnered with design firm Bryan Potter Design to design and print the manuscripts and pamphlet.

USACE CEHO Historical Support Services Supervisory Historian for U.S. Army Corps of Engineers (USACE) Historical Research and Support Services IDIQ. Under an IDIQ with the USACE Office of History and teamed with Winthrop Group and Bryan Potter Group, HRA performed a number of historical research and writing, archival, and interpretive exhibit design services related to the history of the USACE. Projects included digitizing archival materials at the Office of History's archives, developing interpretive content for an exhibit at the Pentagon, and researching, writing, and editing book-length histories of the USACE's disaster response program, the USACE's role in the American Revolution, the Los Angeles District, the Wilmington District, and the Willamette Valley Project.

USACE CEHO Disaster Response Single-Volume Comprehensive History Supervisory Historian and Project Manager for USACE Historical Research and Support Services IDIQ Task Order Request 2, Comprehensive History of USACE Disaster Response Mission for the USACE Office of History. HRA teamed with Damon Manders, author of numerous volumes on USACE history, to complete an engaging and well-illustrated 40,000-word one-volume overview history of the USACE's Disaster Response mission.

HRA worked with the subcontractor to conduct the necessary research to write the entire manuscript. The research was conducted primarily on published primary and secondary sources, including USACE reports; Congressional reports, hearings, and records; newspapers; biographies, memoirs, and published papers of notable individuals; general histories of the U.S. Army and USACE; scholarly journal articles; and published books. HRA was responsible for locating, reproducing, captioning, and crediting a minimum of 125 images for the manuscript. HRA reviewed and edited each chapter as it was written and provided a thorough copy edit of the complete draft manuscript.

Multi-Volume History of the Disaster Response Mission, U.S. Army Corps of Engineers Senior Historian and Project Manager for project to locate images and revise a manuscript narrating the history of the USACE's disaster response mission from the 1980s to the present. HRA has conducted research at the National Archives in College Park, Maryland, the National Records Center in Suitland, Maryland, and the Army Corps Office of History archive at Fort Belvoir, Virginia, and has performed extensive online searches. HRA collected images for projects completed during this era and compiled them in a database. HRA also produced an illustrated report of the USACE response to the Mount St. Helen's explosion.

History of the Far East District U.S. Army Corps of Engineers Senior Historian and Technical Advisor for production of a history of the USACE Far East District's history since its founding, entitled *Building Strong in Korea*: A History of the U. S. Army Corps of Engineers, Far East District, published in September 2019. Topics included military construction across Korea, the Incheon Tidal Basin, the trans-Korean pipeline, work in Japan, emergency construction, FED aviation, and North Korean tunnel detection, all within the context of Korea's broader political and economic history. HRA conducted original primary-source research at the District in Seoul, Republic of Korea, and additional research at the National Archives and public repositories, collecting documentary material, photographs and slides, maps, and digital images. In addition, HRA conducted more than a dozen oral history interviews and utilized nearly a dozen more, each one transcribed and incorporated into the history manuscript when relevant. HRA also provided photo captions and placement suggestions, edited each chapter internally, and maintained a project research archive for transmittal to USACE.

History of the Portland District U.S. Army Corps of Engineers

Senior Historian and Technical Advisor for production of an updated administrative history for the Portland District. The history focused on the years 2000 to 2015 and built upon HRA's previous administrative history for the District, Currents of Change: A History of the Portland District, U.S. Army Corps of Engineers, 1980–2000. The updated history, Engineering in the Twenty-First Century: A History of the Portland District of the U.S. Army Corps of Engineers, 2000–2015, examined the work of the District in the twenty-first century and covered such topics as environmental mitigation, maintenance of aging infrastructure and hydroelectric projects, navigation, and technological changes. It was published in December 2019.

History of the Philadelphia District U.S. Army Corps of Engineers Senior Historian and Editor for an administrative history of the USACE, Philadelphia District, from 1972 to the present. Research for the project involved collecting documents from the Philadelphia District, researching at local historical societies, and conducting oral histories.

History of the Baltimore District U.S. Army Corps of Engineers Project Manager, Principal Investigator, and Co-Author for an administrative history of the USACE, Baltimore District, from 1975 to the present. Research for the project involved collecting documents from the Baltimore District, researching at state archives, and conducting oral histories. Final published manuscript entitled *An Era of Change: A History of the Baltimore District, U.S. Army Corps of Engineers, 1974–2008* (Baltimore: Baltimore District, U.S. Army Corps of Engineers, October 2010).

Other Studies

Product Liability Case, Texas [Confidential] Engaged as an expert to conduct research on a particular product and its period of production, and the corporate history affecting the product and its model line.

Database of Organization Records and Selection/Review of Key Historical Documents for Common Cause, Washington, D.C. HRA assisted Common Cause in assessing, organizing, and producing an inventory of the organization's historical materials. Materials were held by multiple state organizations, a central office, and in a document storage facility.

Historical Investigation of Private Family Cemetery, Columbus, Ohio Senior Historian, Project Manager, and Principal Investigator of the history of a small family cemetery in Upper Arlington, Ohio. HRA conducted research online and in area repositories and provided recommendations for additional locations where research might be undertaken.

Historic Expansion of Bakery Product [Confidential]

Project Manager and Principal Investigator for research on the production, distribution, marketing and sales of a particular brand of bread in the late 1970s and early 1980s for a trademark litigation case.

Wild Turkey History Researcher for a project assisting TBA Global with developing historical content for a new visitor center at the Wild Turkey Bourbon distillery in Lawrenceburg, Kentucky.

Experience with Other Firms

Researcher, Morgan Angel & Associates, LLC, Washington, D.C. Located, assessed, organized, summarized, and interpreted a wide range of historical documents for clients. Provided interpretive guidance for litigators and other clients and participated in the production of policy histories, particularly in the field of natural resources management on Indian reservations and federal environmental policy.

Selected Publications and Presentations

"Why Litigation-Driven History Matters: Lessons Learned from the Secret History of TCE," The Public Historian 37:1 (February 2015), 46-53.
 Co-author with Emily Greenwald and Patrick O'Bannon, "Historians as Experts, Consultants, and Corporate Designees: Help for Your Litigation," SideBAR, Spring 2012, 3-4.